Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 40: October 2, 2022 – October 8, 2022

All data are preliminary and may change as more reports are received.

Summary:

- The estimated influenza activity in Missouri is Sporadic[2]. Cases of influenza were reported in all five regions of the State. However, the overall ILI activity for week 40 remains minimal (Level 3).[3]

- During Week 40, a total of 80 laboratory-positive[4] influenza cases (51 influenza A, 29 influenza B and 0 untyped) were reported. The influenza type for reported season-to-date cases includes 63.8 % influenza A, 36.2 % influenza B. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 0.4% during Week 40.

- Influenza-like illness (ILI) activity for Week 40 was below baseline for the hospital emergency room visit chief complaint data reported through ESSENCE. The reported percentage of visits for ILI through ESSENCE was just below baseline at 1.86% (Figure 6).[5]

- Mortality data lags case data by several weeks. Therefore, the number of influenza-associated deaths reported for week 40 will be included in future reports.[6]

- No influenza or ILI-associated outbreaks have been reported in Missouri as of Week 40.

- National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1] The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2] Sporadic is defined as: Small numbers of laboratory-confirmed influenza cases or a single laboratory-confirmed influenza outbreak has been reported, but there is no increase in ILI.

[3] ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4] Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5] ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6] All influenza-associated deaths became reportable in Missouri in 2016.

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/1W99rC.*Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 40**

- **Reported Week-specific Rate per 100,000 Population, CDC Week 40**

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**

- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Week 40 (October 2, 2022 – October 8, 2022)[*]

Influenza Type	Week 40	2022-23[*] Season-to-Date
Influenza A	51	51
Influenza B	29	29
Influenza Unknown Or Untyped	0	0
Total	80	80

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 40 (October 2, 2022 – October 8, 2022)[*‡]

Age Group	Week 40 Cases	Week 40 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	17	4.62	17	4.62
05-24	25	1.60	25	1.60
25-49	15	0.77	15	0.77
50-64	14	1.17	14	1.17
65+	9	0.85	9	0.85
Total	80	1.30	80	1.30

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)

[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 40 (October 2, 2022 – October 8, 2022)[*‡]
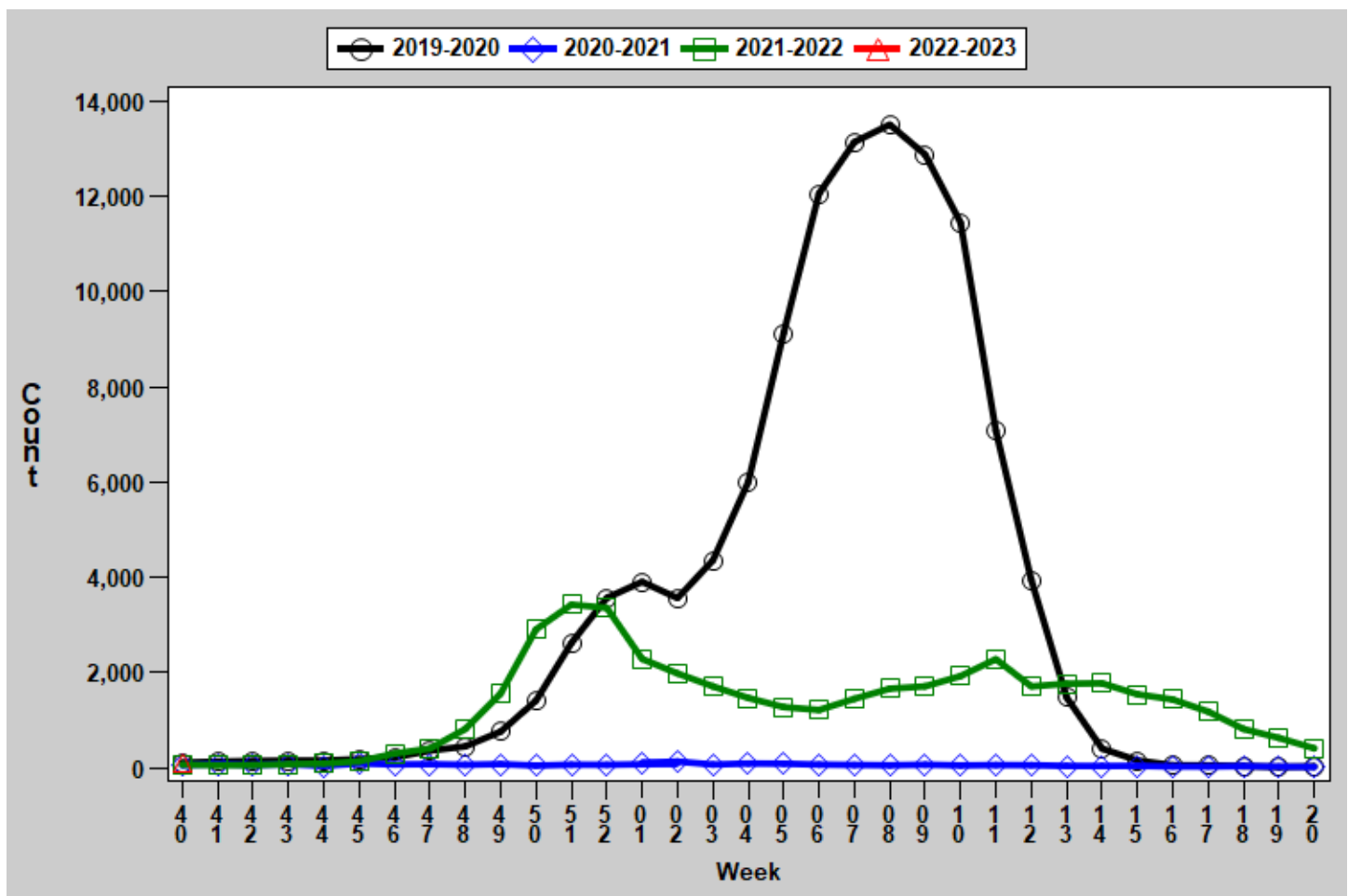
Region	Week 40 Cases	Week 40 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	13	1.93	13	1.93
Eastern	33	1.46	33	1.46
Northwest	16	0.98	16	0.98
Southeast	3	0.69	3	0.69
Southwest	15	1.43	15	1.43
Total	80	1.30	80	1.30

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
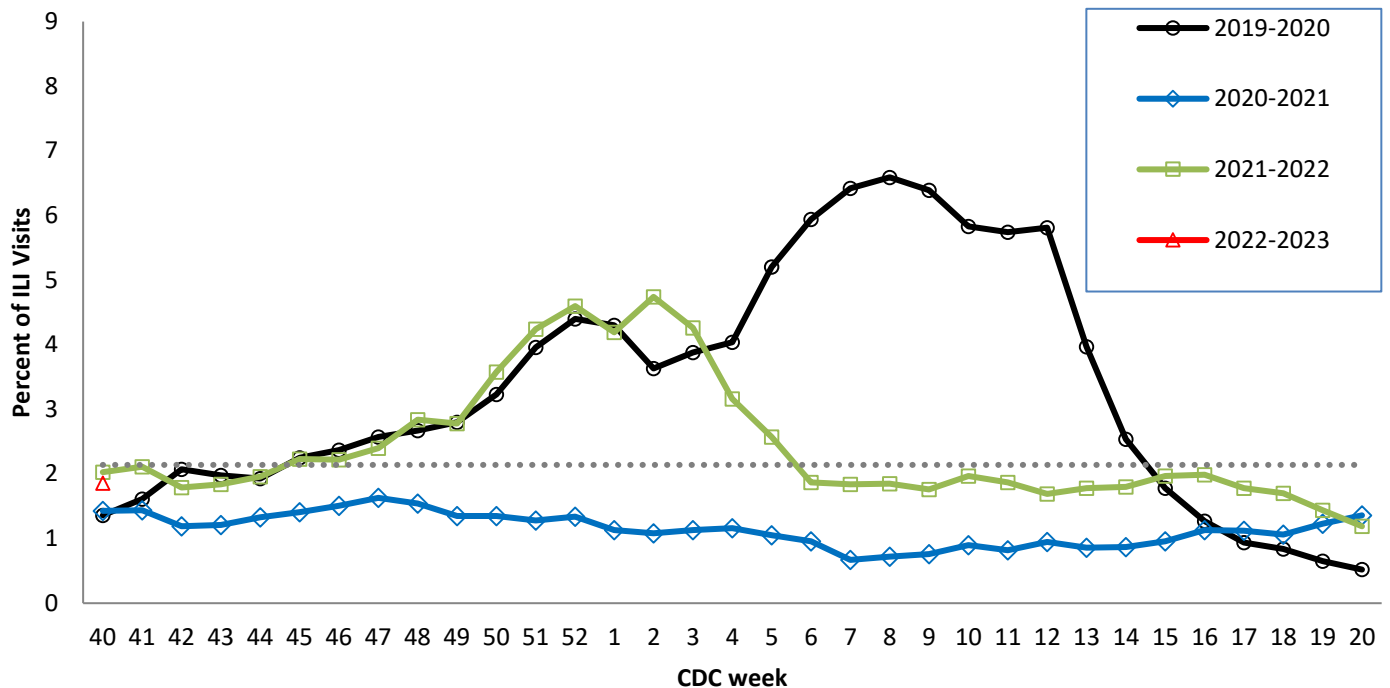[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-20223season-to-date through the week ending October 8, 2022 (Week 40).Data Source: Missouri Health Information Surveillance System (WebSurv)

Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri
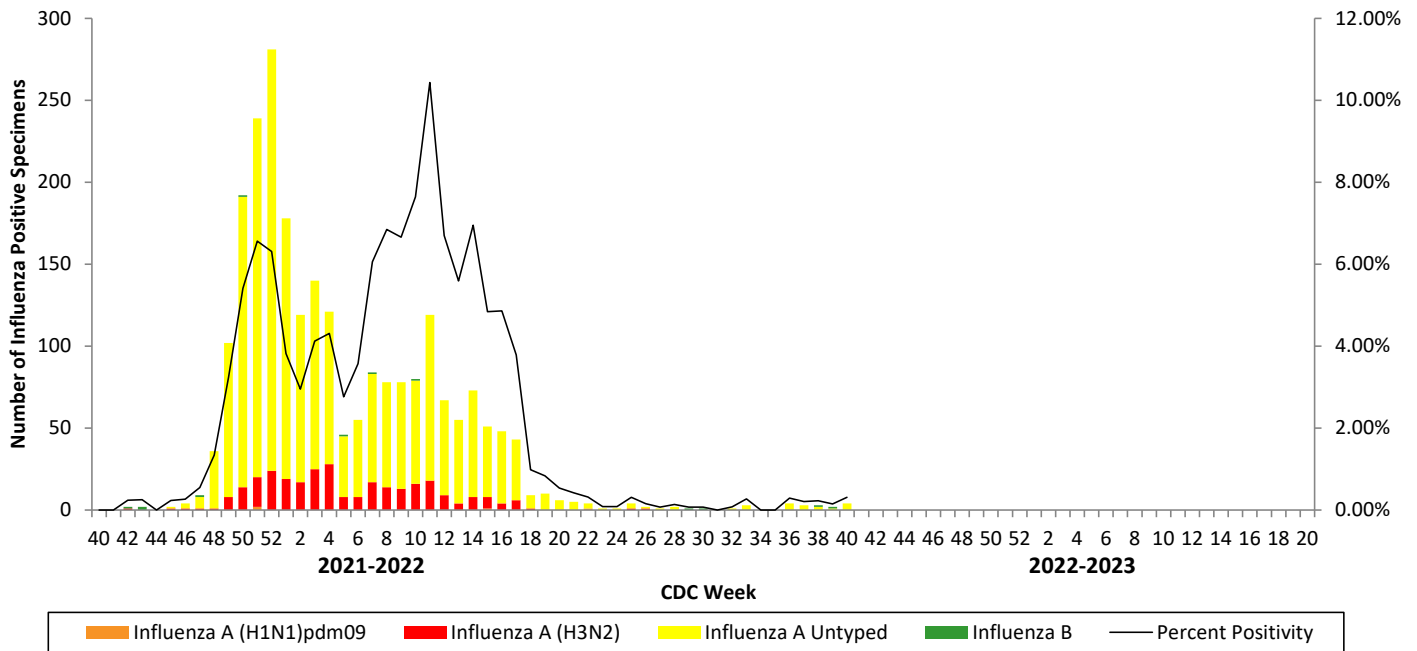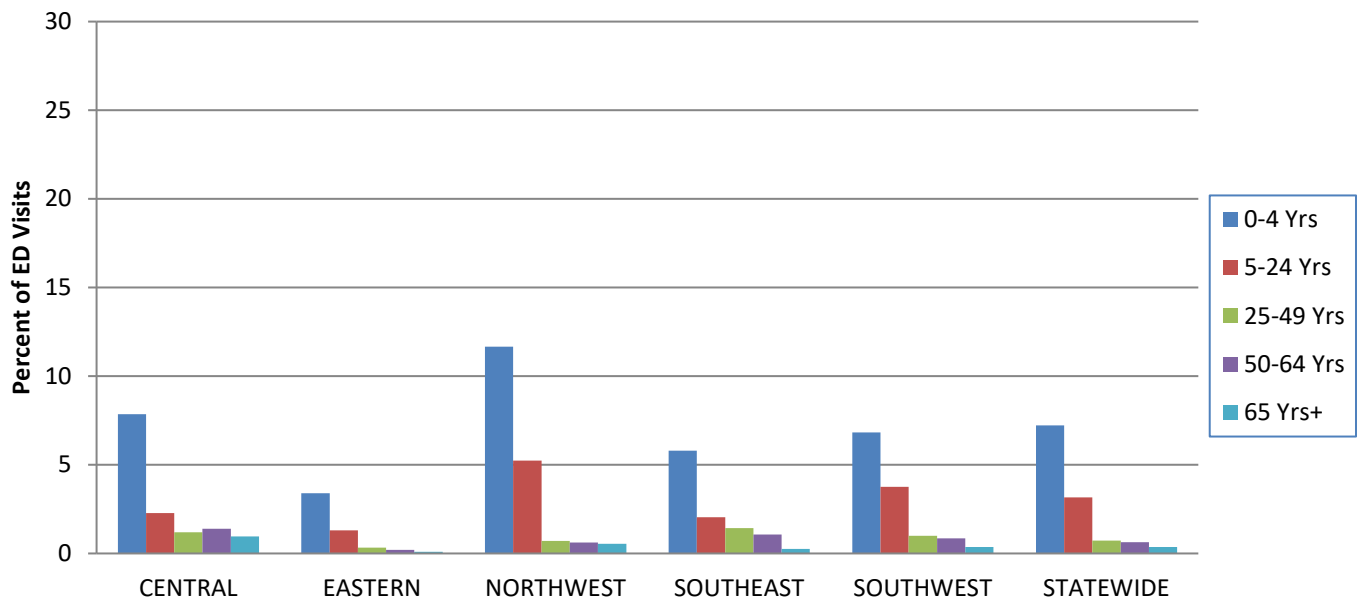

Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
2022-2023 season-to-date through the week ending October 8, 2022 (Week 40).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI
  visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS),
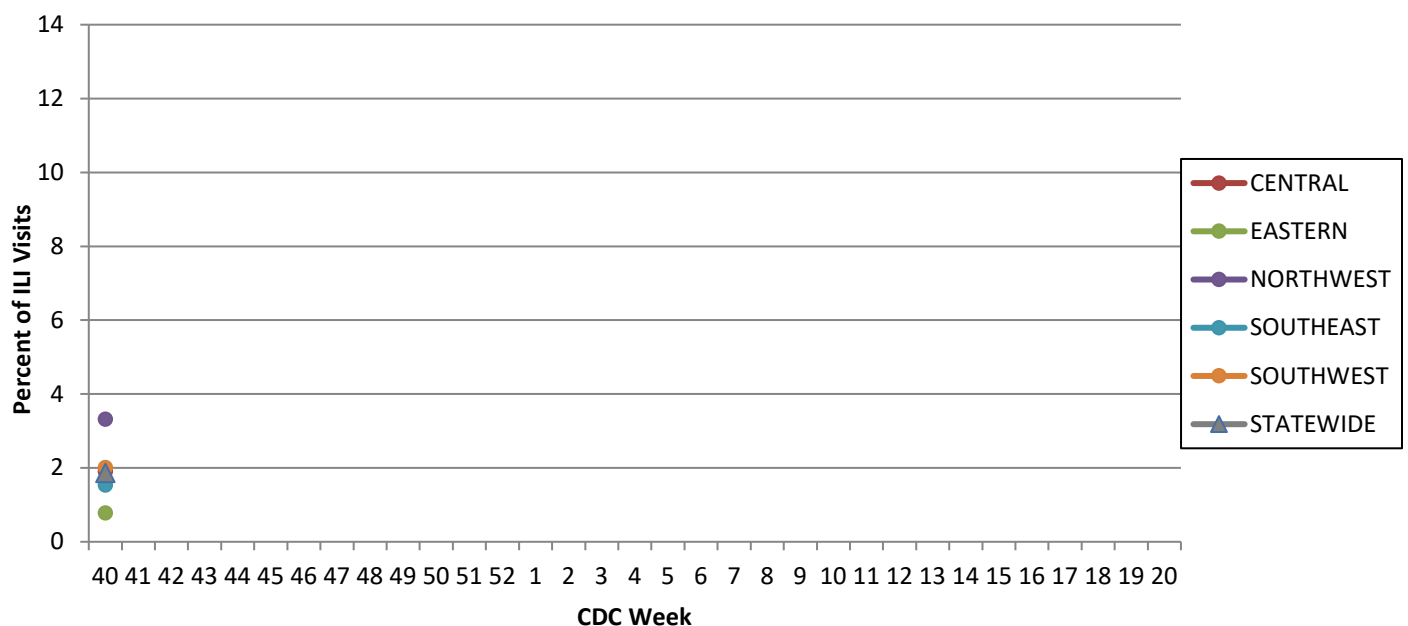 Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 40, 2022[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.
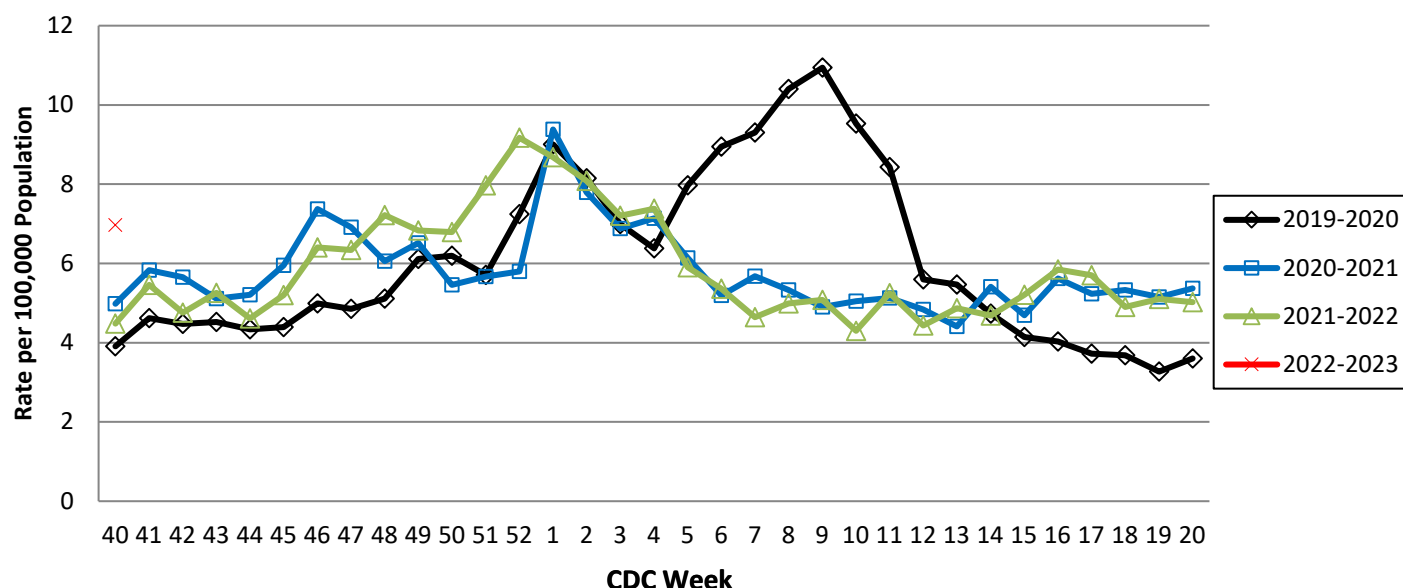
Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
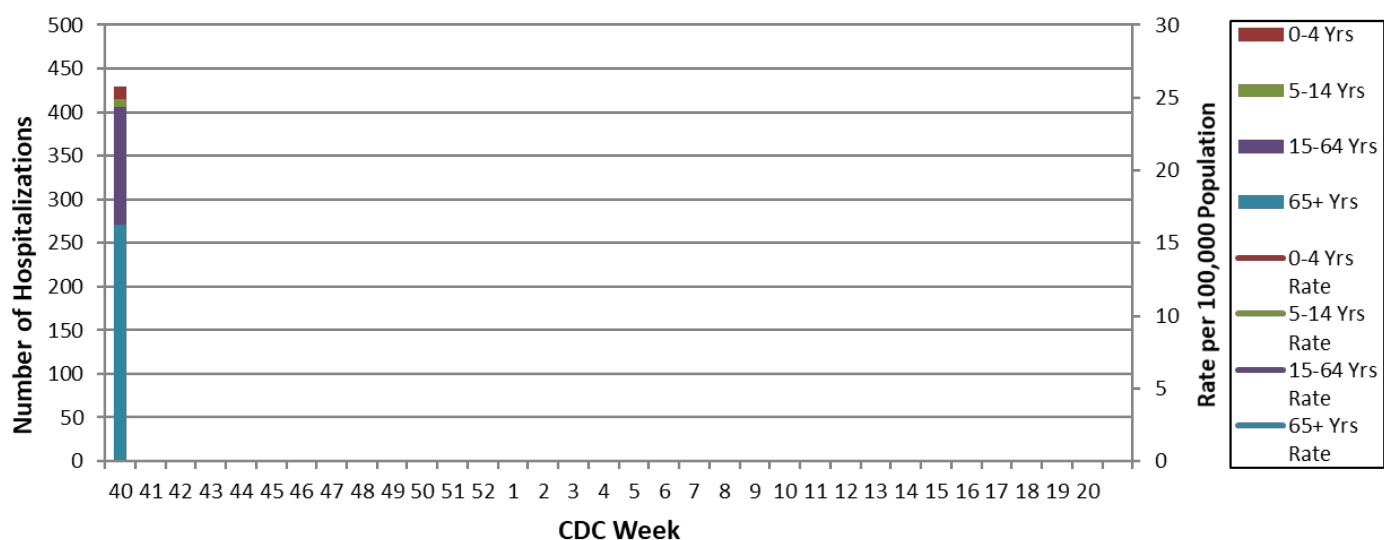[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 9. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal. Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 10. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 40, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 41: October 9, 2022 – October 15, 2022

All data are preliminary and may change as more reports are received.

Summary:

- The estimated influenza activity in Missouri is Regional[2]. Cases of influenza were reported in all five regions of the State. However, the overall ILI activity for week 41 remains minimal (Level 3).[3]

- During Week 41, a total of 170 laboratory-positive[4] influenza cases (118 influenza A, 50 influenza B and 2 untyped) were reported. The influenza type for reported season-to-date cases includes 67.7 % influenza A, 31.6 % influenza B and 0.7% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) increased to 0.6% during Week 41.

- Influenza-like illness (ILI) activity for Week 41 was at baseline for the hospital emergency room visit chief complaint data reported through ESSENCE. The reported percentage of visits for ILI through ESSENCE increased to 2.14 % (Figure 6).[5]

- No influenza-associated deaths have been reported in Missouri as of week 41.

- No influenza or ILI-associated outbreaks have been reported in Missouri as of Week 41.

- National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1] The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2] Regional is defined as: Outbreaks of influenza or increases in ILI and recent laboratory confirmed influenza in at least two but less than half the regions of the state with recent laboratory evidence of influenza in those regions.

[3] ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4] Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5] ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6] All influenza-associated deaths became reportable in Missouri in 2016. Influenza deaths are collected from Missouri's death certificate database. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Due to reporting delays, current week data should be considered preliminary.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 41**

- **Reported Week-specific Rate per 100,000 Population, CDC Week 41**

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**

- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 40-41 (October 2, 2022 – October 15, 2022)[*]

Influenza Type	Week 40	Week 41	2022-2023[*] Season-to-Date
Influenza A	73	118	191
Influenza B	39	50	89
Influenza Unknown Or Untyped	0	2	2
Total	112	170	282

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 41 (October 8, 2022 – October 15, 2022)[*‡]
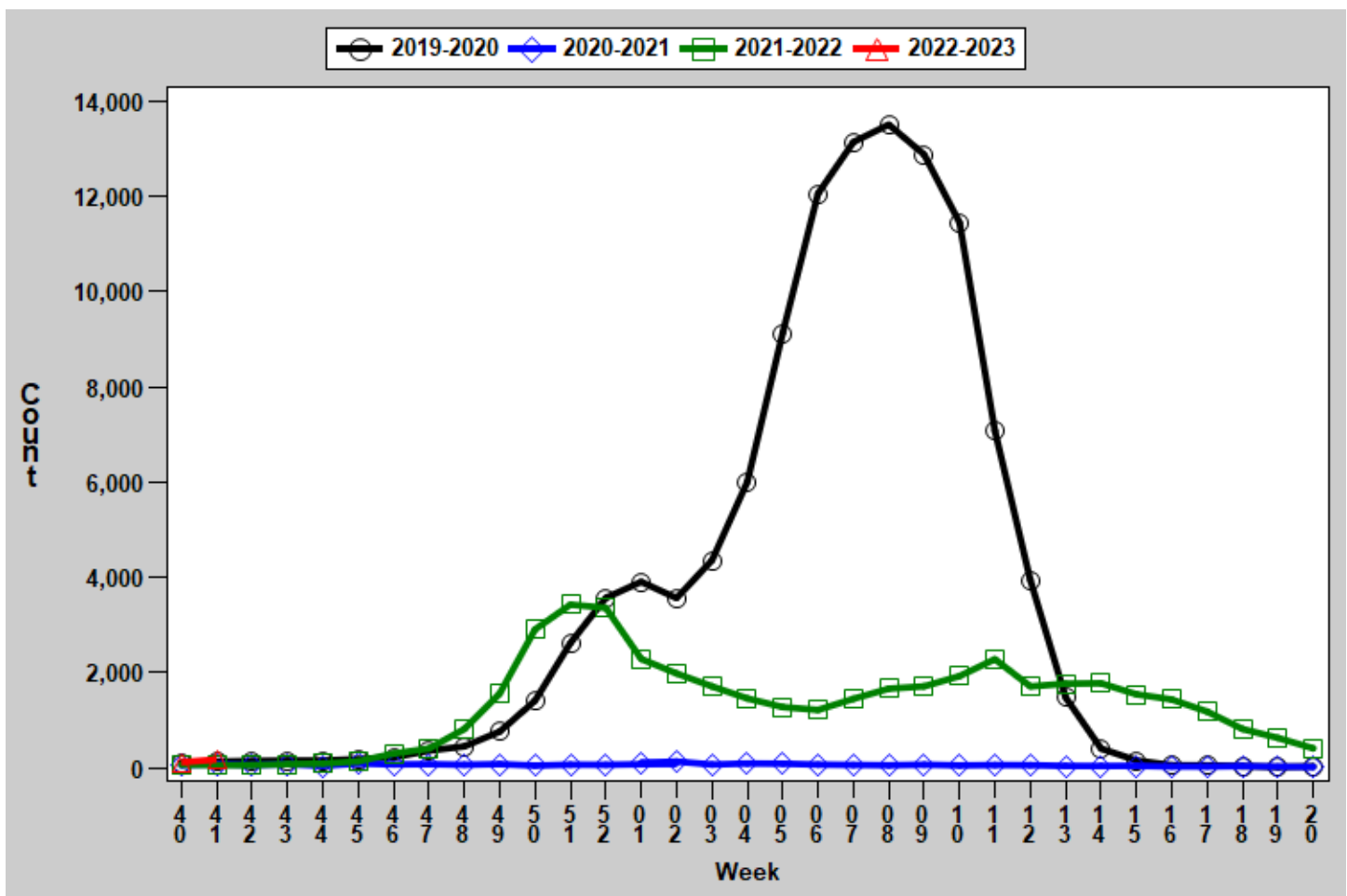
Age Group	Week 41 Cases	Week 41 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	37	10.05	55	14.94
05-24	51	3.26	88	5.63
25-49	35	1.80	62	3.19
50-64	28	2.33	44	3.67
65+	19	1.79	33	3.11
Total	170	2.77	282	4.59

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
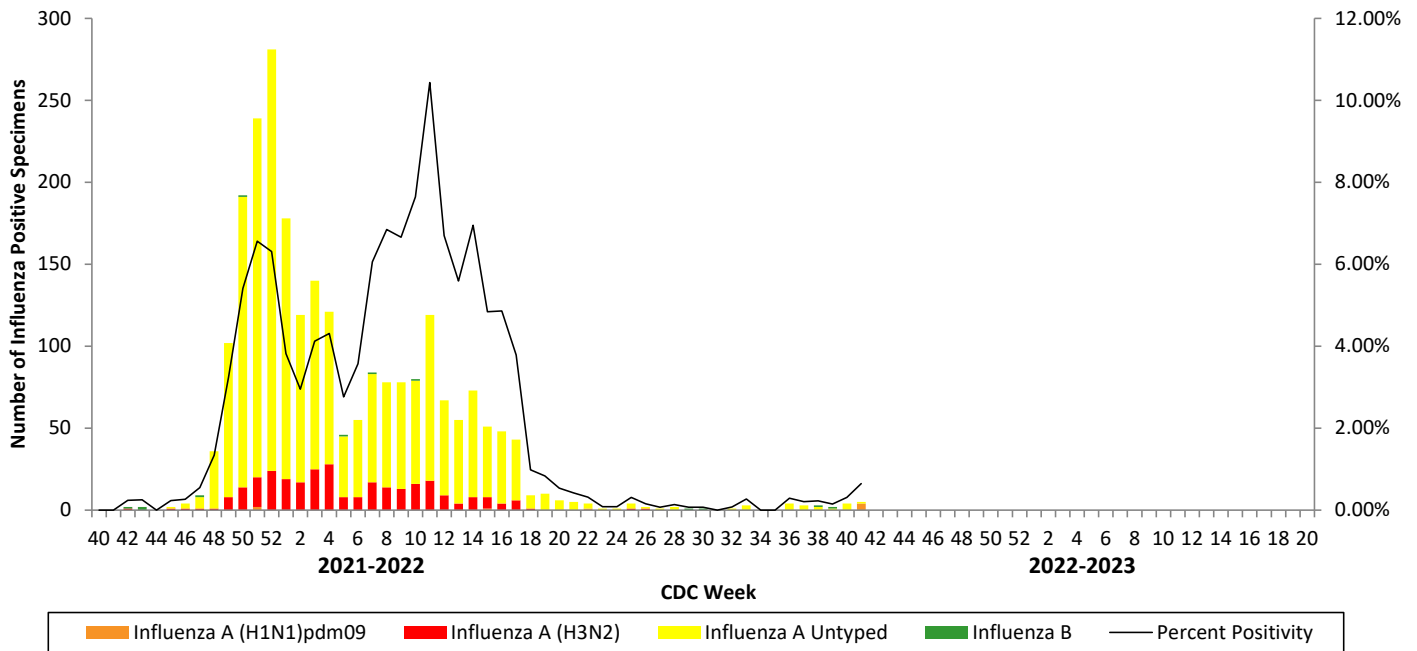[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 41 (October 8, 2022 – October 15, 2022)[*‡]

Region	Week 41 Cases	Week 41 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	21	3.11	34	5.04
Eastern	54	2.38	92	4.06
Northwest	69	4.22	107	6.54
Southeast	11	2.54	17	3.93
Southwest	15	1.43	32	3.05
Total	170	2.77	282	4.59

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
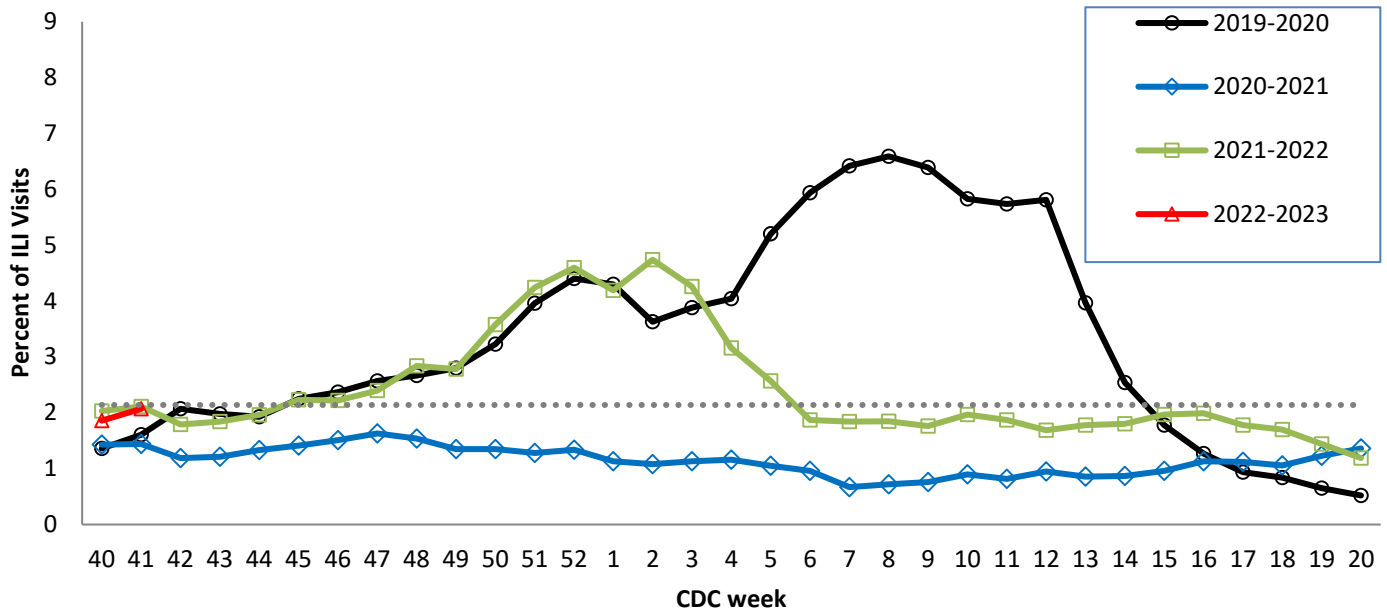[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending October 15, 2022 (Week 41).Data Source: Missouri Health Information Surveillance System (WebSurv)

Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri

Legend: Influenza A (H1N1)pdm09 | Influenza A (H3N2) | Influenza A Untyped | Influenza B | Percent Positivity
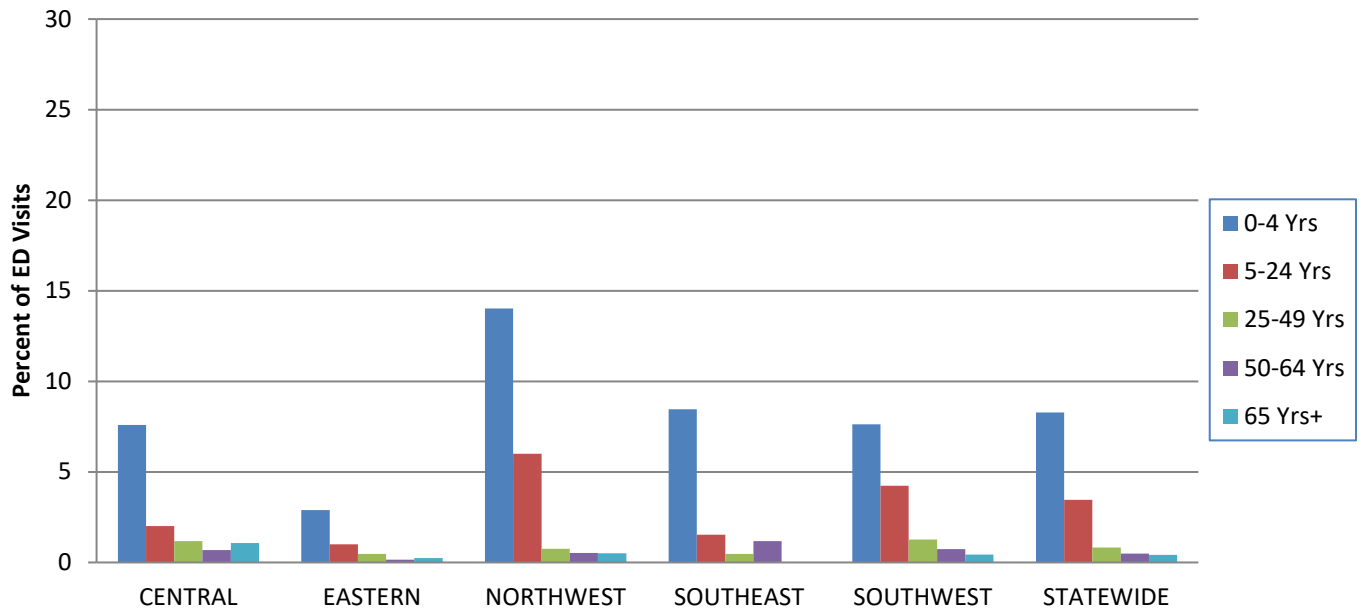
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
2022-2023 season-to-date through the week ending October 15, 2022 (Week 41).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
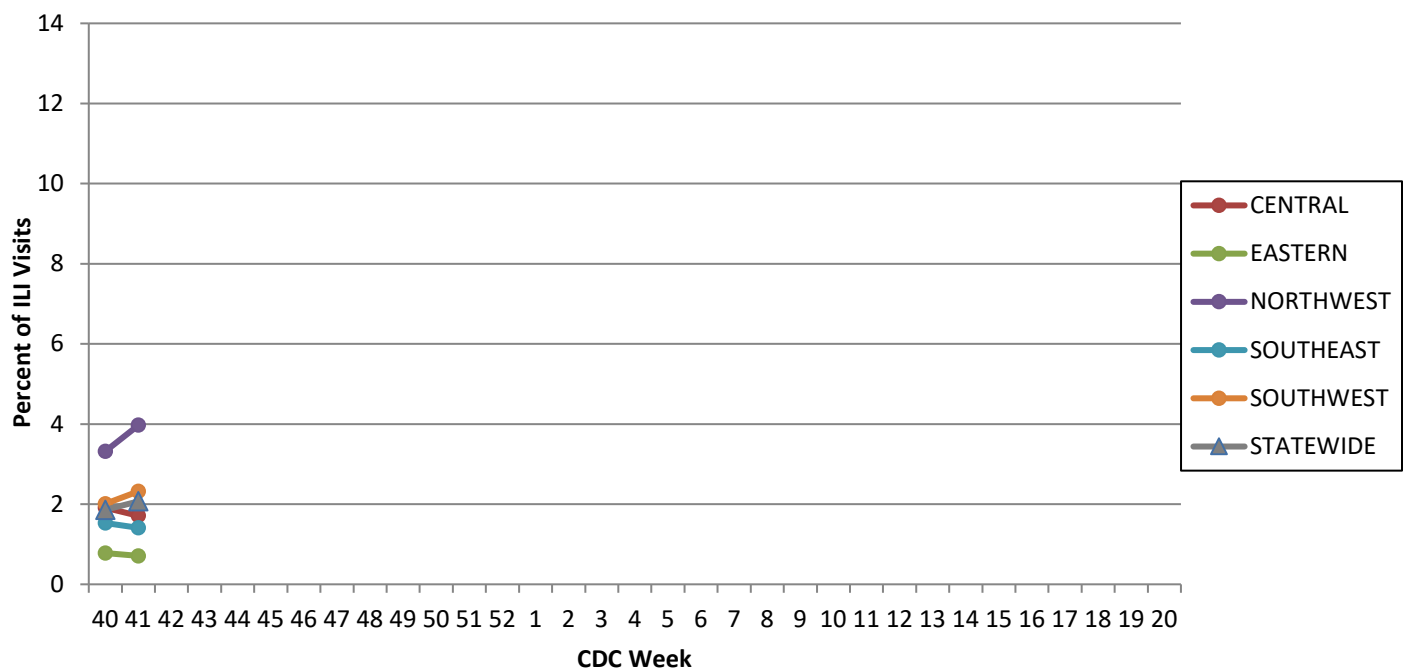
Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 41, 2022[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.
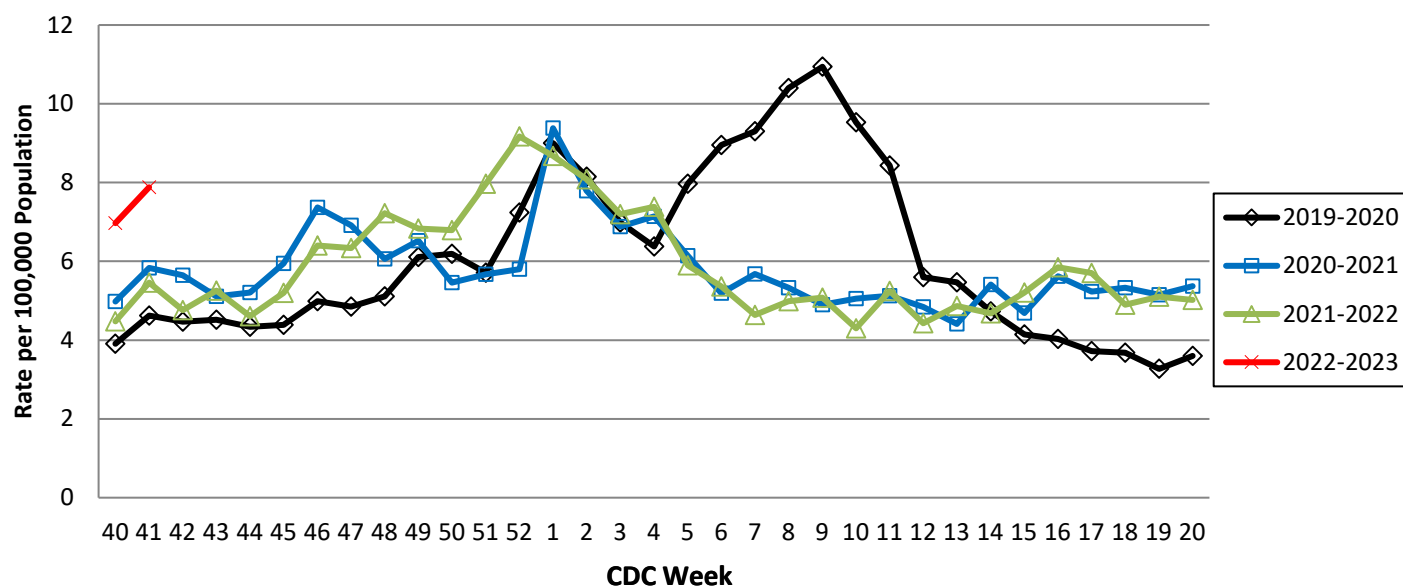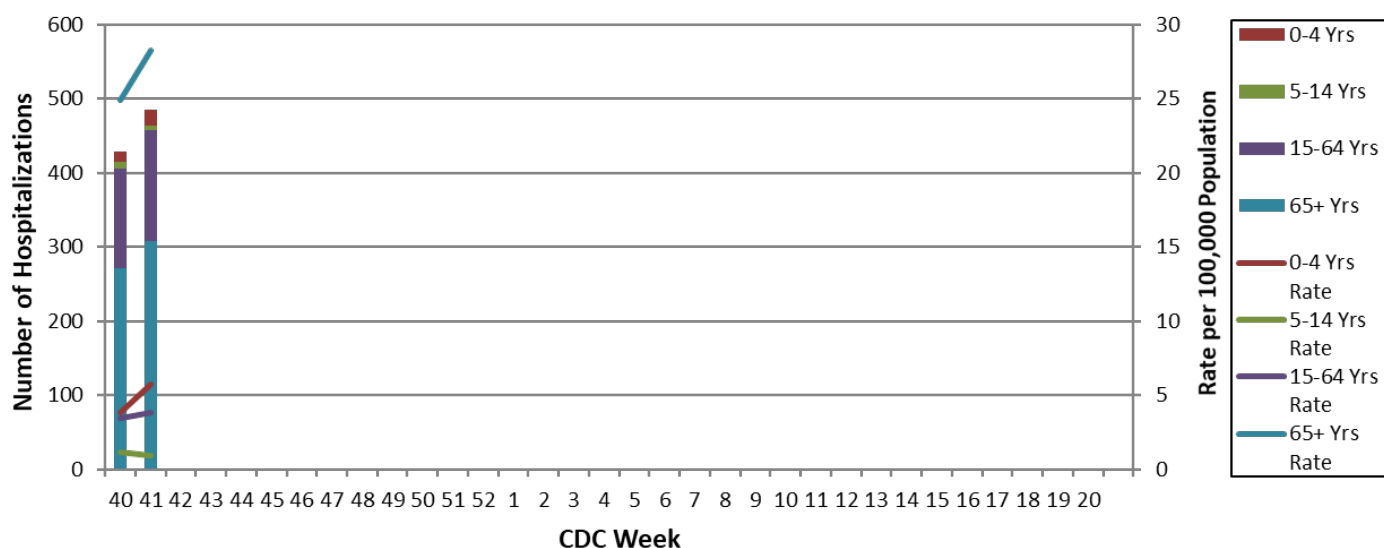
Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 9. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal. Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 10. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 41, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 42: October 16, 2022 – October 22, 2022

All data are preliminary and may change as more reports are received.

Summary:

- The estimated influenza activity in Missouri is Regional[2]. Cases of influenza were reported in all five regions of the State. The overall ILI activity for week 42 increased to Low (Level 4).[3]

- During Week 42, a total of 323 laboratory-positive[4] influenza cases (254 influenza A, 67 influenza B and 2 untyped) were reported. The influenza type for reported season-to-date cases includes 73.3 % influenza A, 26.1 % influenza B and 0.6% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) increased to 2.5% during Week 42.

- Influenza-like illness (ILI) activity for Week 42 was above baseline for the hospital emergency room visit chief complaint data reported through ESSENCE. The reported percentage of visits for ILI through ESSENCE increased to 2.66 % (Figure 6).[5]

- No influenza-associated deaths have been reported in Missouri as of week 42.

- No influenza or ILI-associated outbreaks have been reported in Missouri as of Week 42.

- National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Regional is defined as: Outbreaks of influenza or increases in ILI and recent laboratory confirmed influenza in at least two but less than half the regions of the state with recent laboratory evidence of influenza in those regions.

[3]ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]All influenza-associated deaths became reportable in Missouri in 2016. Influenza deaths are collected from Missouri's death certificate database. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Due to reporting delays, current week data should be considered preliminary.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 42**

- **Reported Week-specific Rate per 100,000 Population, CDC Week 42**

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**

- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 40-42 (October 2, 2022 – October 22, 2022)[*]

Influenza Type	Week 40	Week 41	Week 42	2022-2023[*] Season-to-Date
Influenza A	81	187	254	522
Influenza B	47	72	67	186
Influenza Unknown Or Untyped	0	2	2	4
Total	128	261	323	712

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 42 (October 16, 2022 – October 22, 2022)[*‡]

Age Group	Week 42 Cases	Week 42 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	67	18.20	141	38.31
05-24	154	9.85	281	17.97
25-49	57	2.93	146	7.51
50-64	27	2.25	83	6.92
65+	18	1.69	61	5.74
Total	323	5.26	712	11.60

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 42 (October 8, 2022 – October 15, 2022)[*‡]
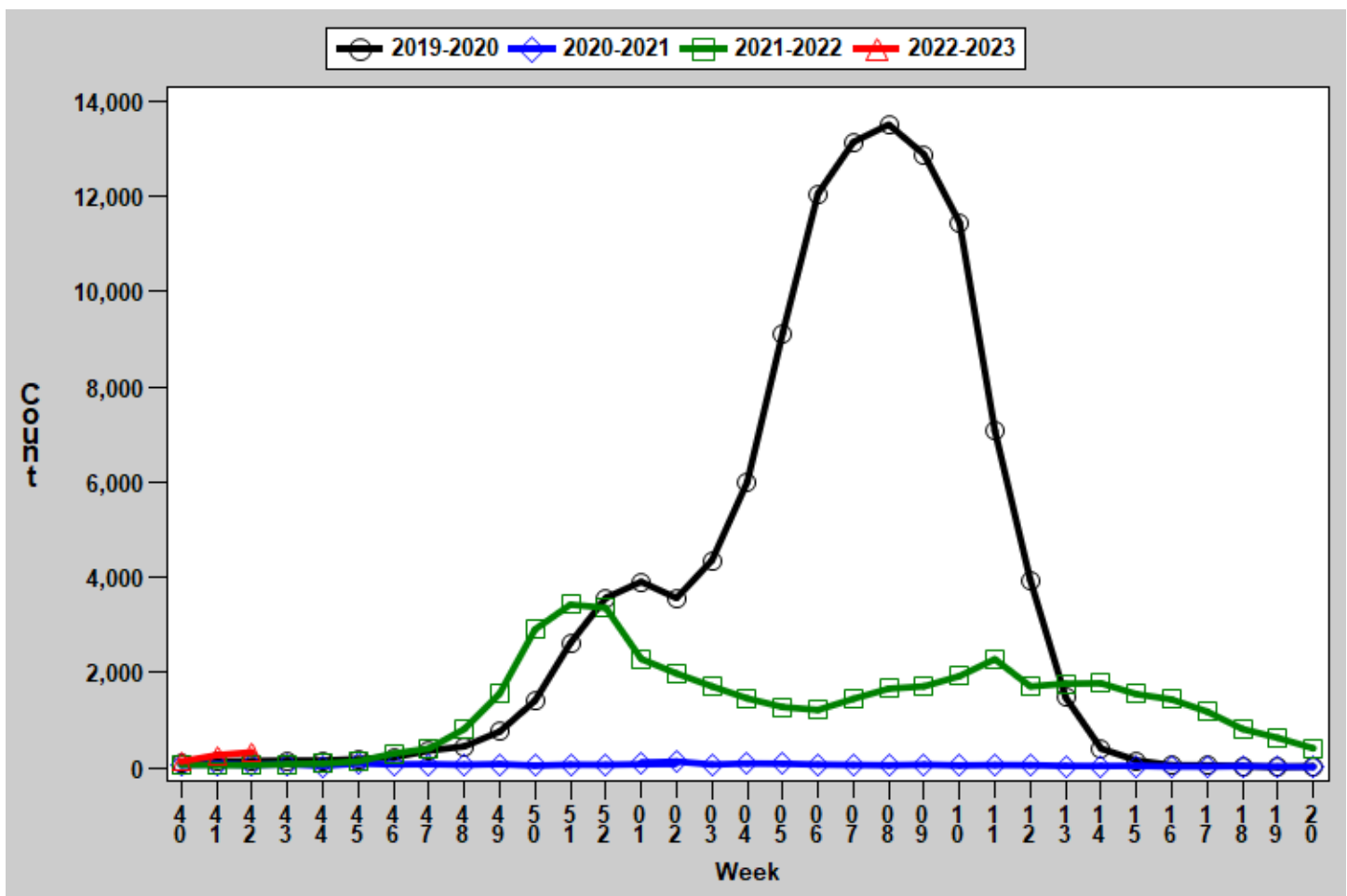
Region	Week 42 Cases	Week 42 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	31	4.59	83	12.30
Eastern	86	3.79	184	8.11
Northwest	45	2.75	188	11.49
Southeast	96	22.20	135	31.22
Southwest	65	6.19	122	11.61
Total	323	5.26	712	11.60

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
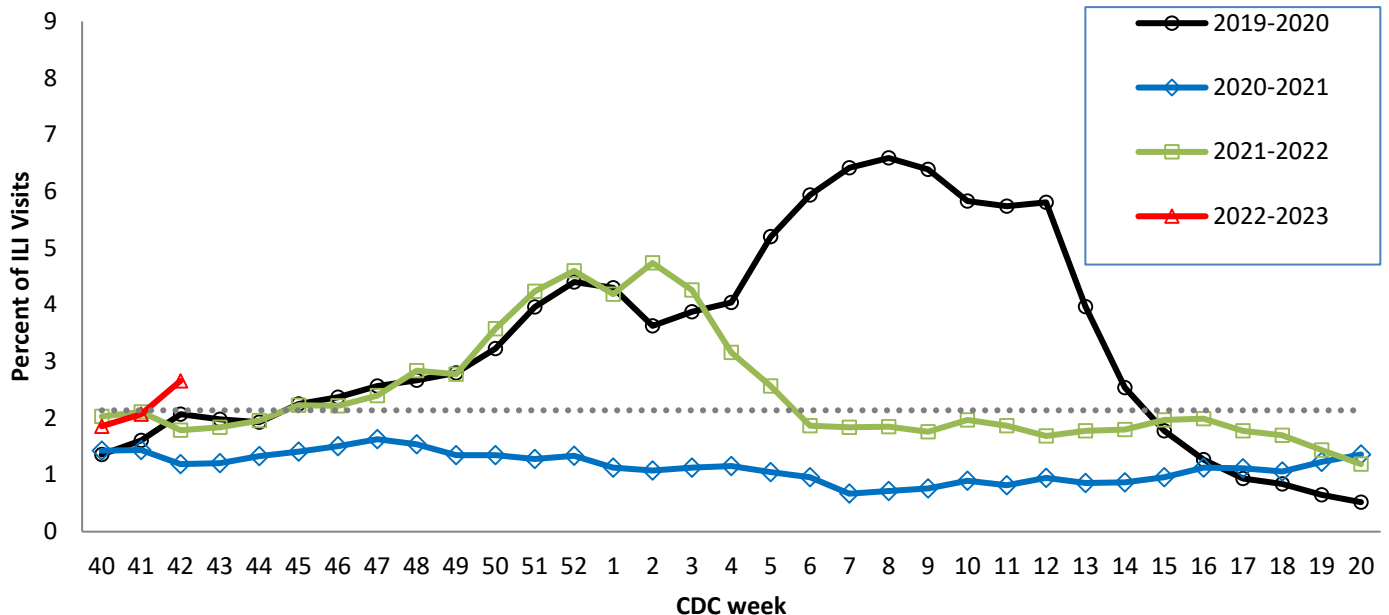[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending October 22, 2022 (Week 42).Data Source: Missouri Health Information Surveillance System (WebSurv)

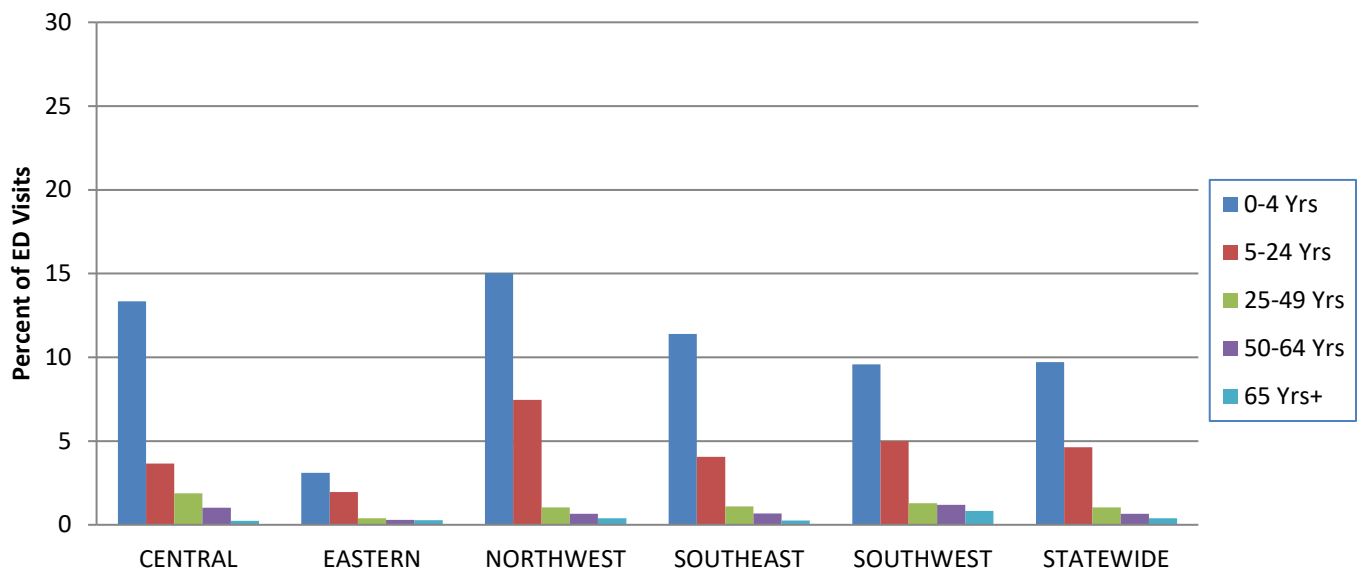## Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri
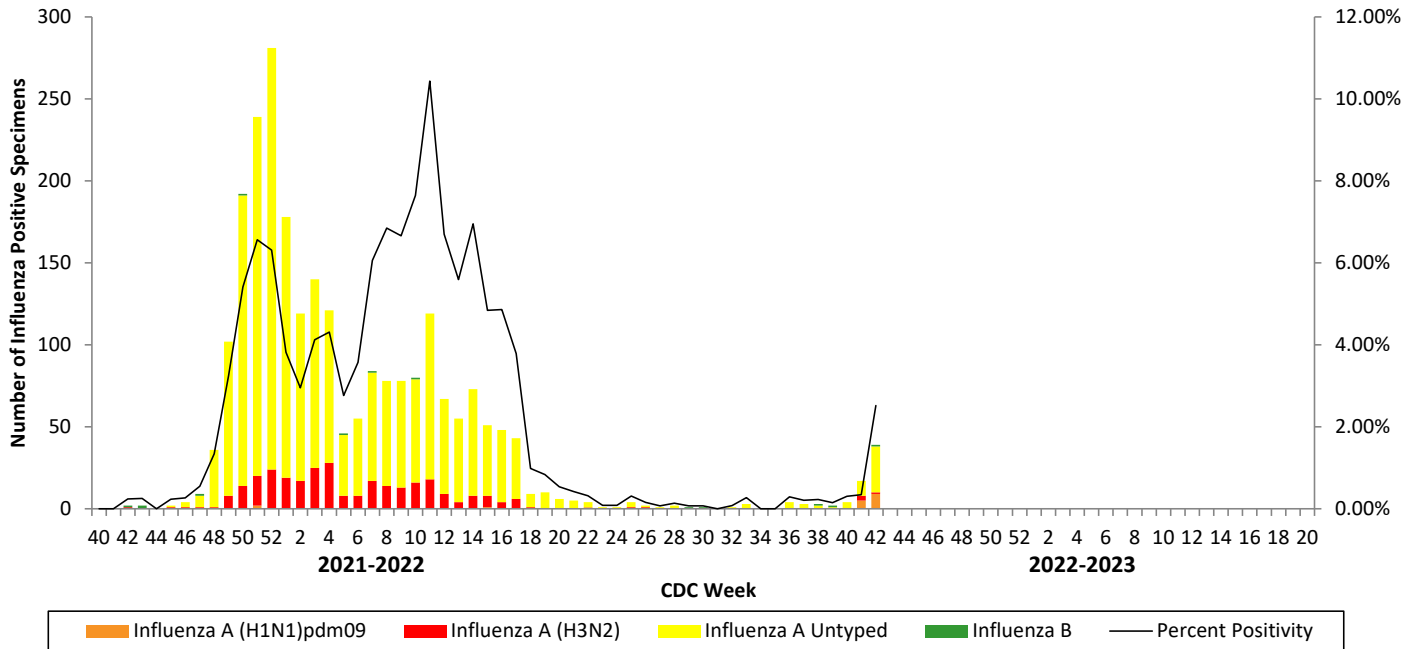
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
2022-2023 season-to-date through the week ending October 15, 2022 (Week 42).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
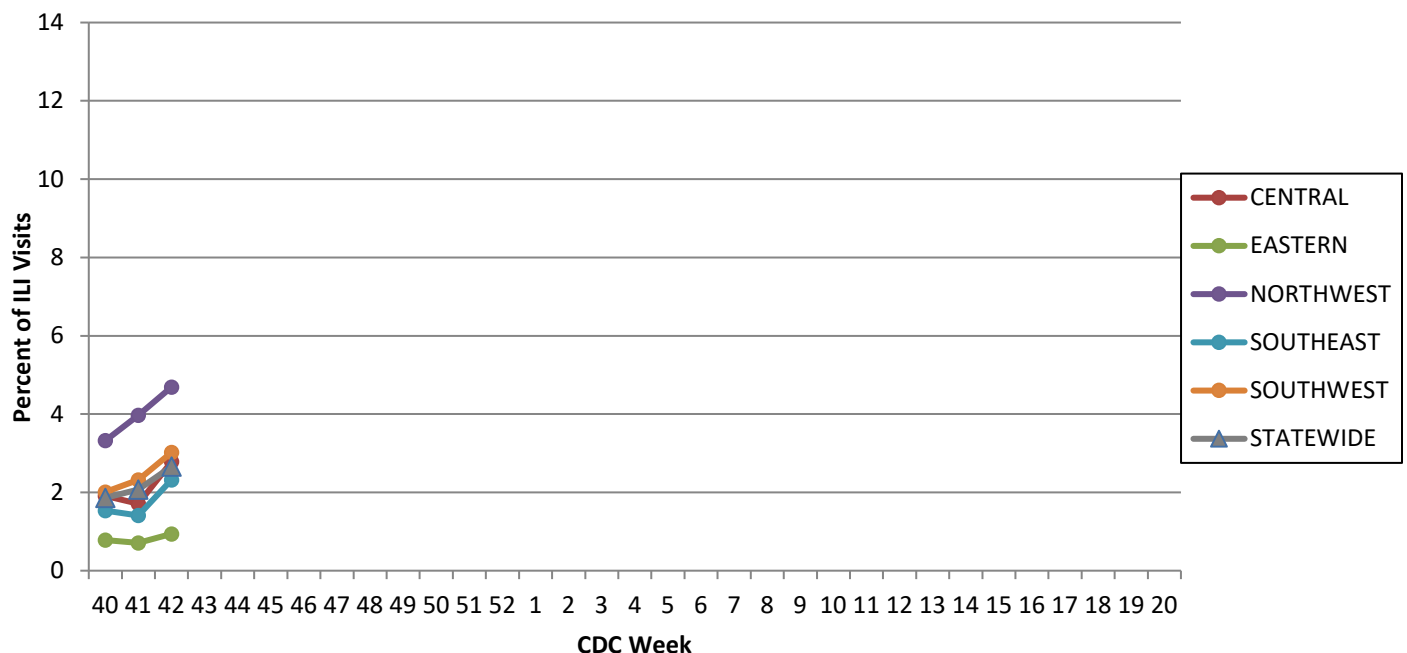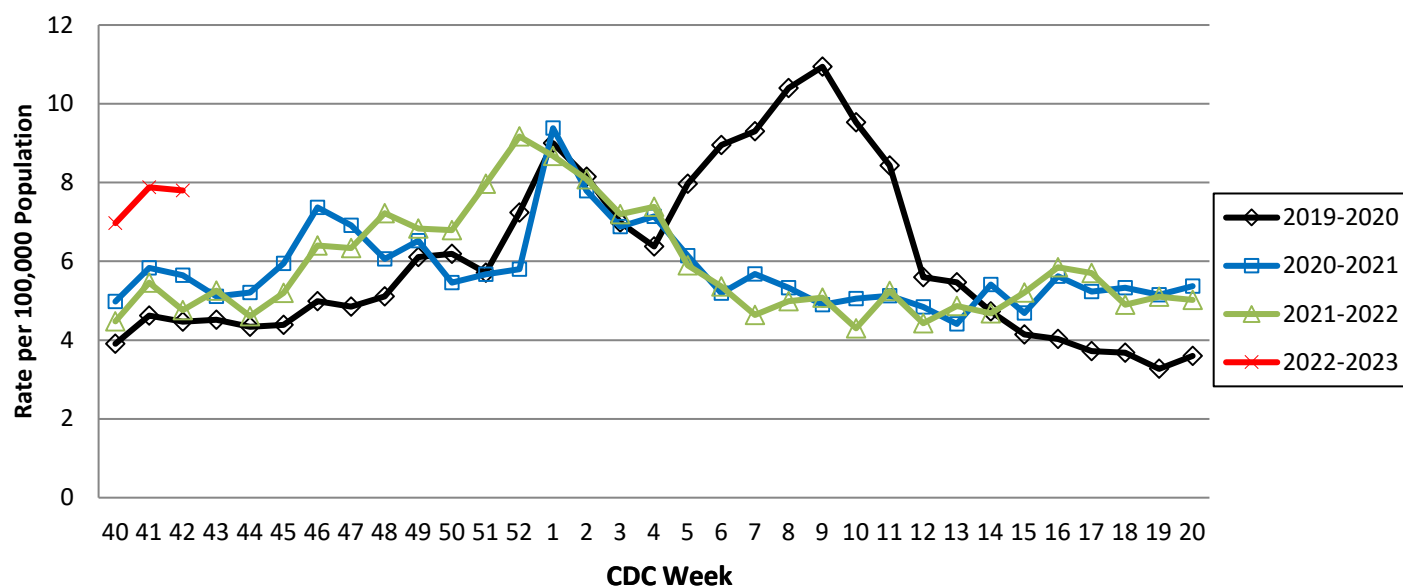
Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 42, 2022[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
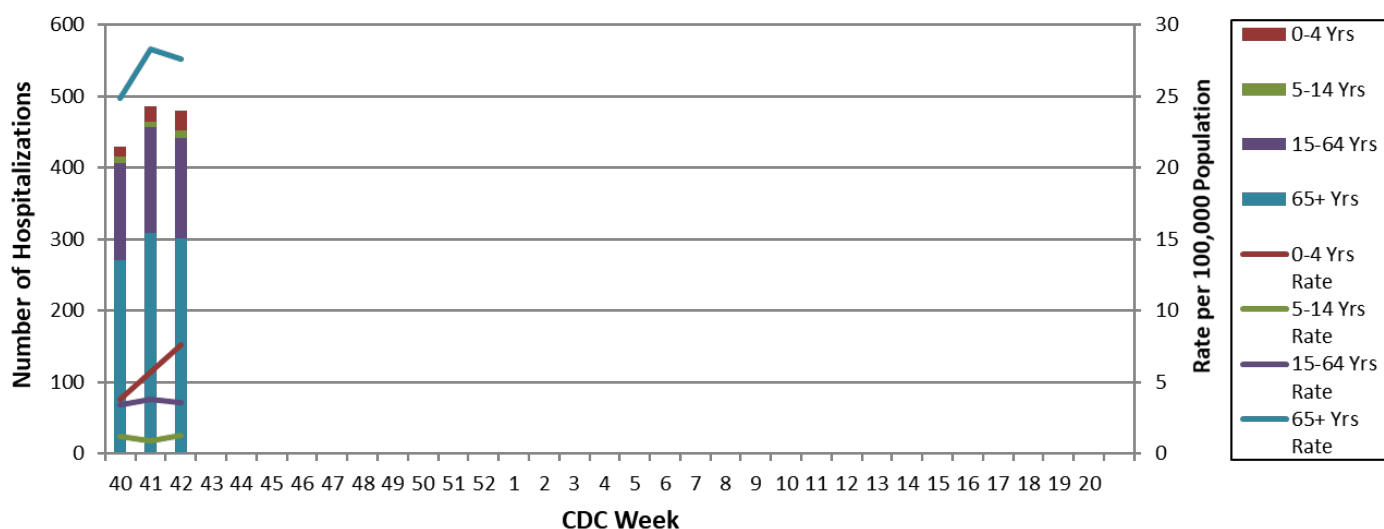[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 9. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal. Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 10. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 42, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 43: October 23, 2022 – October 29, 2022

All data are preliminary and may change as more reports are received.

Summary:

- The estimated influenza activity in Missouri remains Regional[2]. The overall Influenza-like illness (ILI) activity increased to Level 5, though remains in the low category.[3] Cases of influenza continue to be reported in all five regions of the State as influenza activity continued to increase during Week 43.

- During Week 43, a total of 893 laboratory-positive[4] influenza cases (808 influenza A, 80- influenza B and 5 untyped) were reported. The influenza type for reported season-to-date cases includes 82.4 % influenza A, 17 % influenza B and 0.6% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) increased to 7.7% during Week 43.

- Influenza-like illness activity for Week 43 was above baseline for the hospital emergency room visit chief complaint data reported through ESSENCE. The reported percentage of visits for ILI through ESSENCE increased to 3.07 % (Figure 6).[5]

- No influenza-associated deaths have been reported in Missouri as of Week 41[6].

- No influenza or ILI-associated outbreaks have been reported in Missouri as of Week 43.

- Early increases in seasonal influenza activity have been reported nationally, with the southeast and south-central areas of the country reporting the highest levels of activity. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Regional is defined as: Outbreaks of influenza or increases in ILI and recent laboratory confirmed influenza in at least two but less than half the regions of the state with recent laboratory evidence of influenza in those regions.

[3]ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 43**

- **Reported Week-specific Rate per 100,000 Population, CDC Week 43**

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**

- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 41-43 (October 9, 2022 – October 29, 2022)[*]

Influenza Type	Week 41	Week 42	Week 43	2022-2023[*] Season-to-Date
Influenza A	208	397	808	1,500
Influenza B	80	101	80	309
Influenza Unknown Or Untyped	3	3	5	11
Total	291	501	893	1,820

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 43 (October 23, 2022 – October 29, 2022)[*‡]

Age Group	Week 43 Cases	Week 43 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	111	30.16	278	75.53
05-24	463	29.60	849	54.28
25-49	175	9.01	366	18.84
50-64	81	6.75	187	15.58
65+	63	5.93	140	13.18
Total	893	14.55	1,820	29.65

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 43 (October 23, 2022 – October 29, 2022)[*‡]
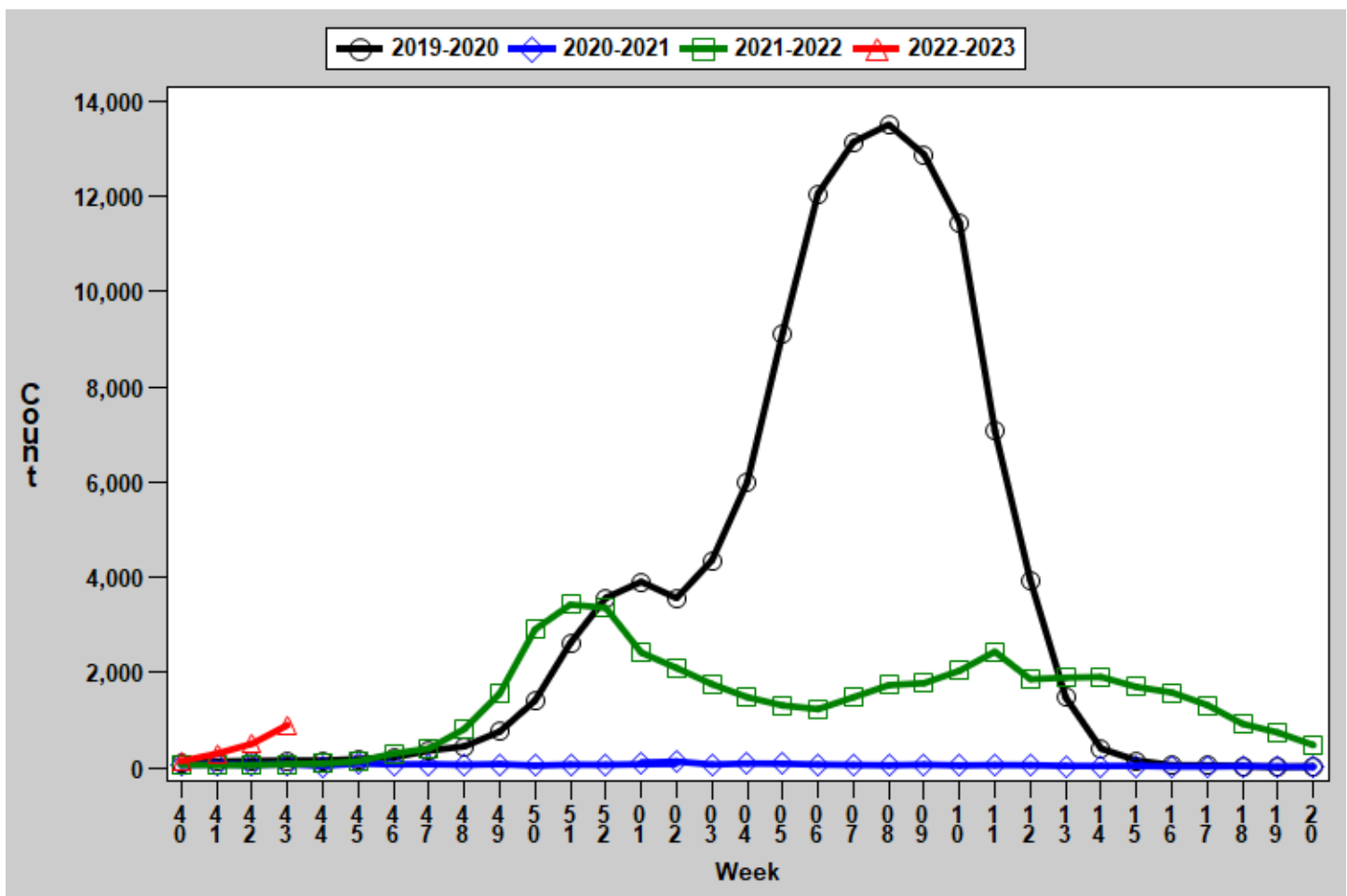
Region	Week 43 Cases	Week 43 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	44	6.52	135	20.01
Eastern	231	10.19	439	19.36
Northwest	213	13.01	569	34.76
Southeast	271	62.67	407	94.12
Southwest	134	12.75	270	25.70
Total	893	14.55	1,820	29.65

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
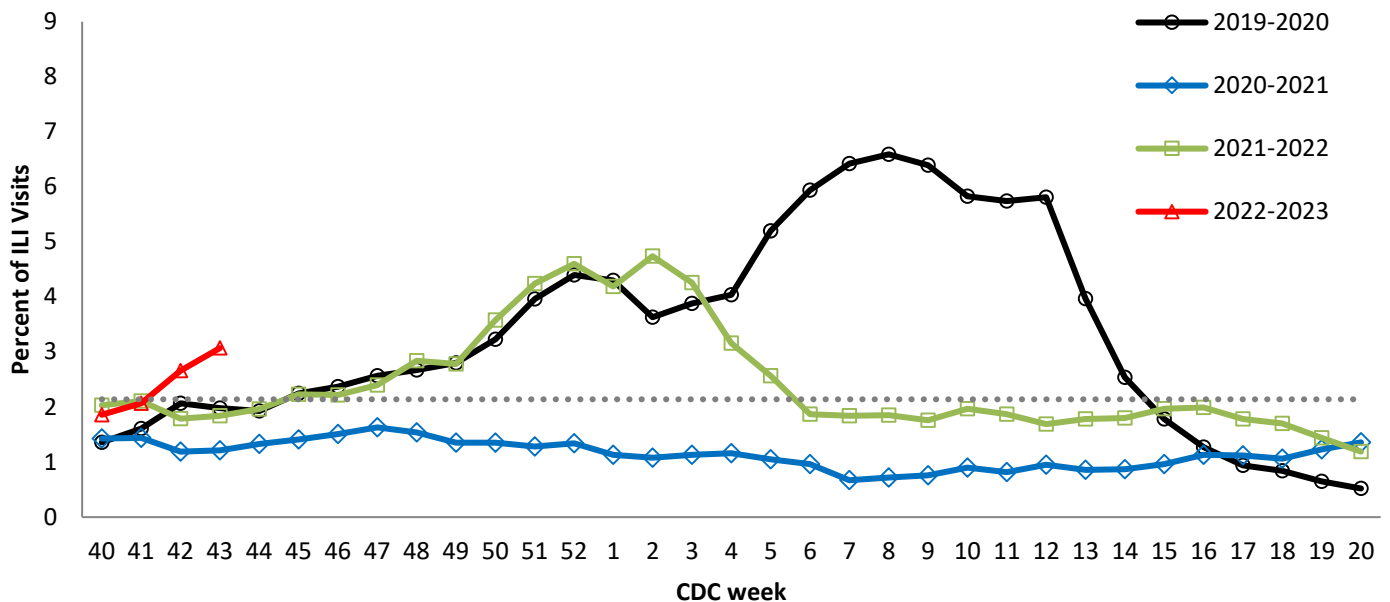[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending October 29, 2022 (Week 43).Data Source: Missouri Health Information Surveillance System (WebSurv)

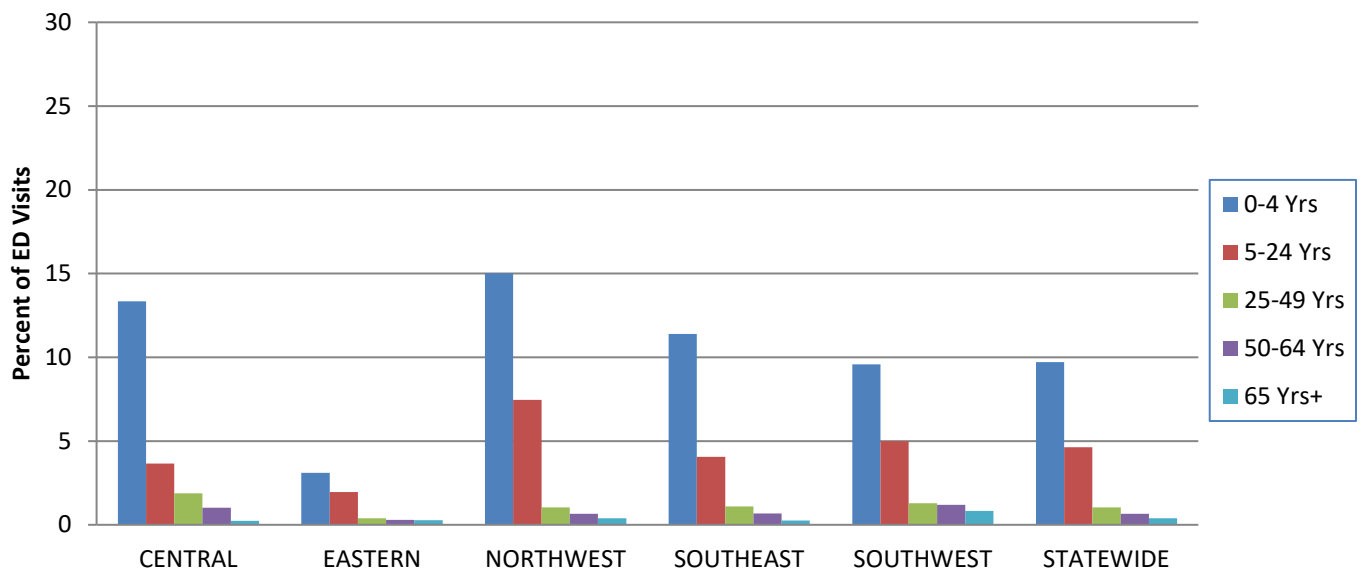## Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri
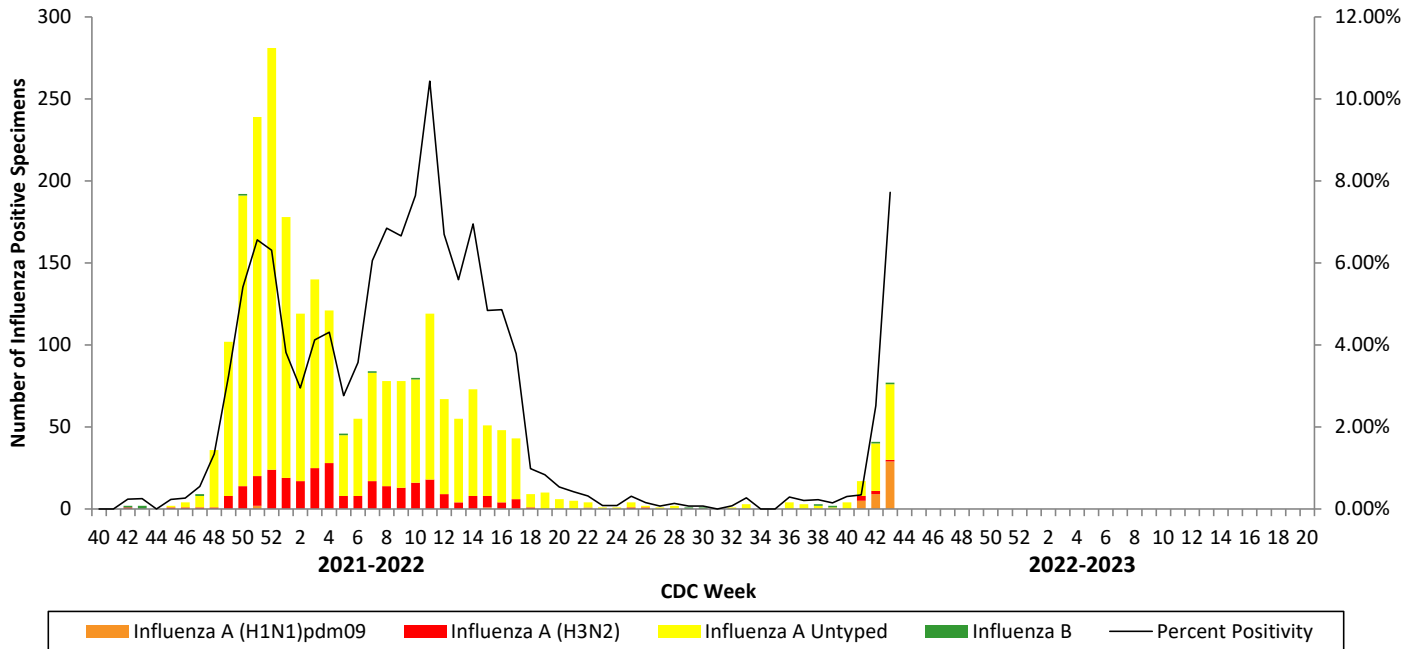
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
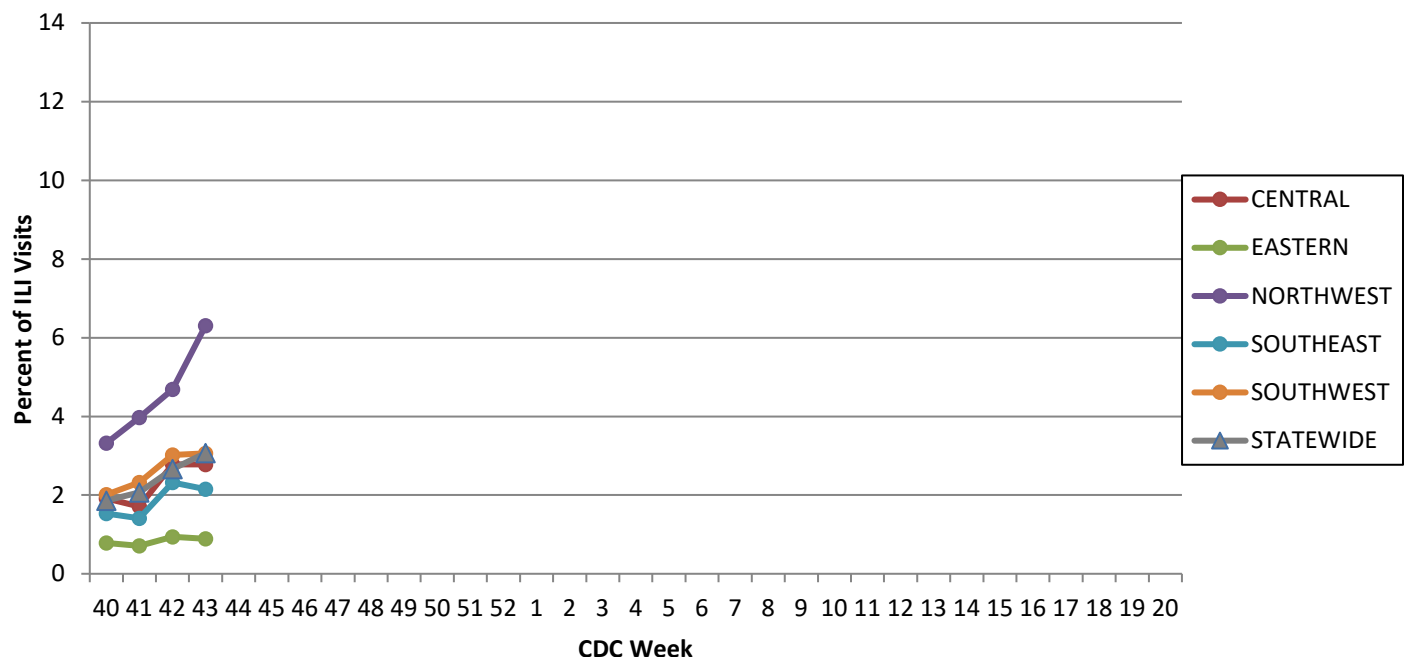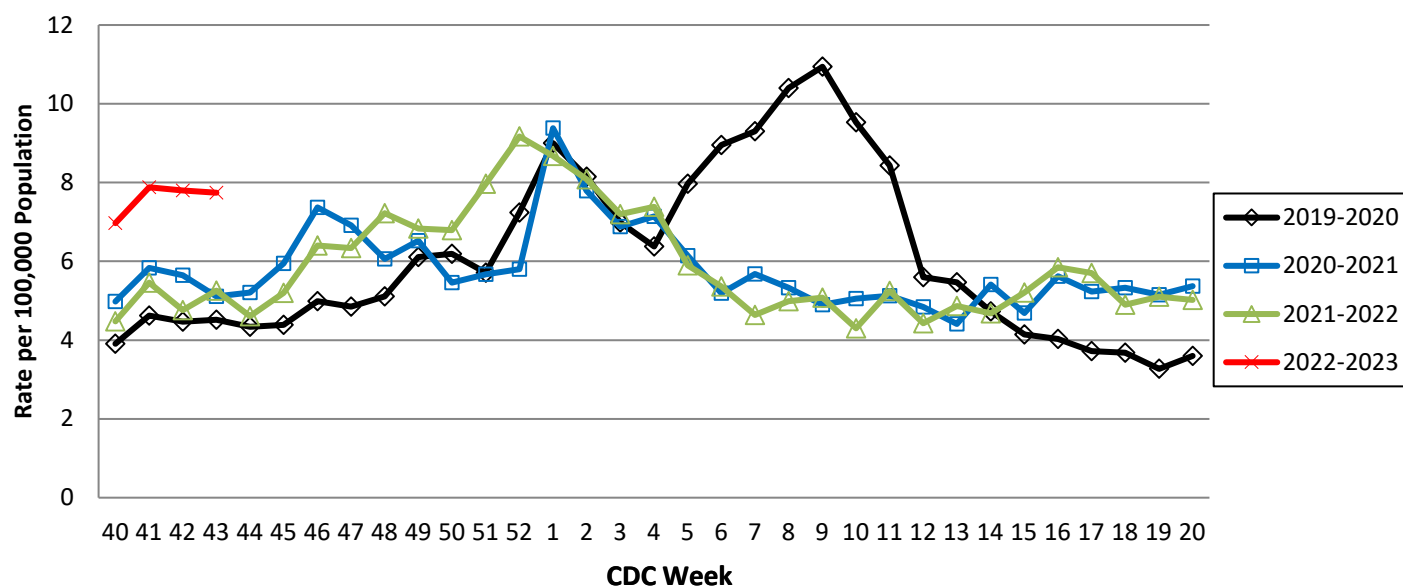2022-2023 season-to-date through the week ending October 29, 2022 (Week 43).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 43, 2022*

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
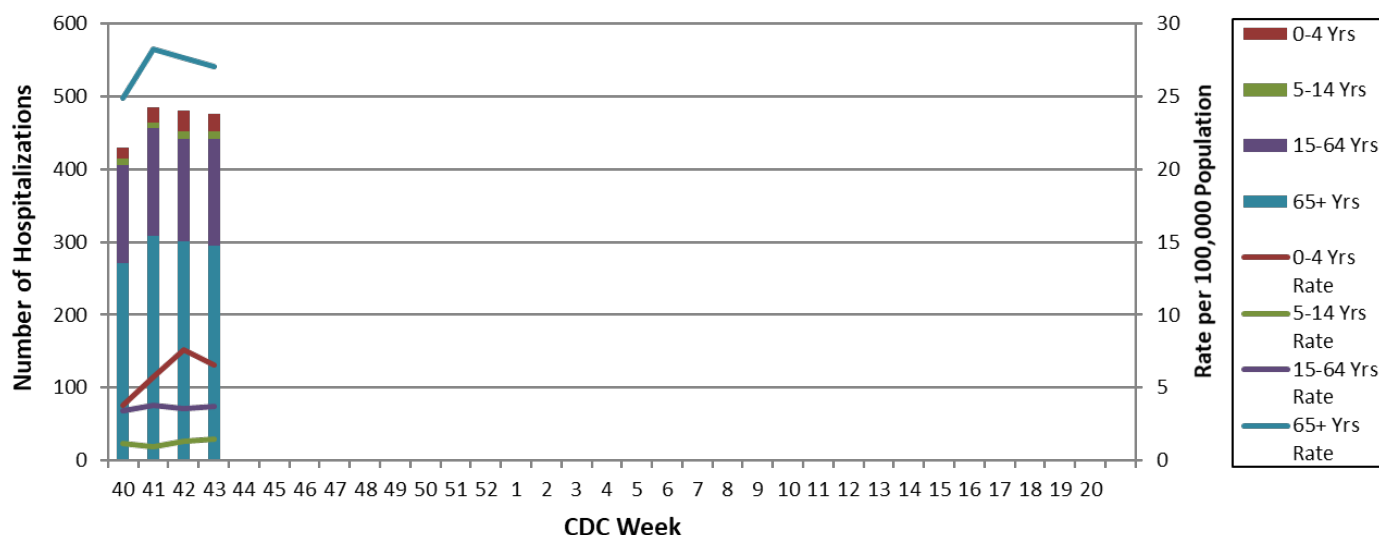*The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season*

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
*The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 9. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal. Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 10. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 43, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 44: October 30, 2022 – November 5, 2022

All data are preliminary and may change as more reports are received.

Summary:

- Influenza activity continued to increase across Missouri during Week 44. The estimated influenza activity in Missouri remains regional[2], however, the overall Influenza-like illness (ILI) activity increased to Level 6 in the moderate category.[3]

- During Week 44, a total of 1,738 laboratory-positive[4] influenza cases (1,606 influenza A, 122 influenza B and 10 untyped) were reported. The influenza type for reported season-to-date cases includes 86.3% influenza A, 13% influenza B and 0.7% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) increased to 8.9% during Week 44.

- Influenza-like illness activity for Week 44 was above baseline for the hospital emergency room visit chief complaint data reported through ESSENCE. The reported percentage of visits for ILI through ESSENCE increased to 3.58 % (Figure 6).[5]

- No influenza-associated deaths have been reported in Missouri as of Week 42[6].

- No influenza outbreaks have been reported in Missouri as of Week 44.

- Early increases in seasonal influenza activity have been reported nationally, with the southeast and south-central areas of the country reporting the highest levels of activity. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Regional is defined as: Outbreaks of influenza or increases in ILI and recent laboratory confirmed influenza in at least two but less than half the regions of the state with recent laboratory evidence of influenza in those regions.

[3]ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. Click on the jurisdiction to view the influenza data specific to that jurisdiction.

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 44**

- **Reported Week-specific Rate per 100,000 Population, CDC Week 44**

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**

- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

**Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type,
Missouri, CDC Weeks 42-44 (October 16, 2022 – November 5, 2022)[*]**

Influenza Type	Week 42	Week 43	Week 44	2022-2023[*] Season-to-Date
Influenza A	423	1,132	1,606	3,465
Influenza B	116	138	122	523
Influenza Unknown Or Untyped	4	10	10	28
Total	543	1,280	1,738	4,016

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

**Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group,
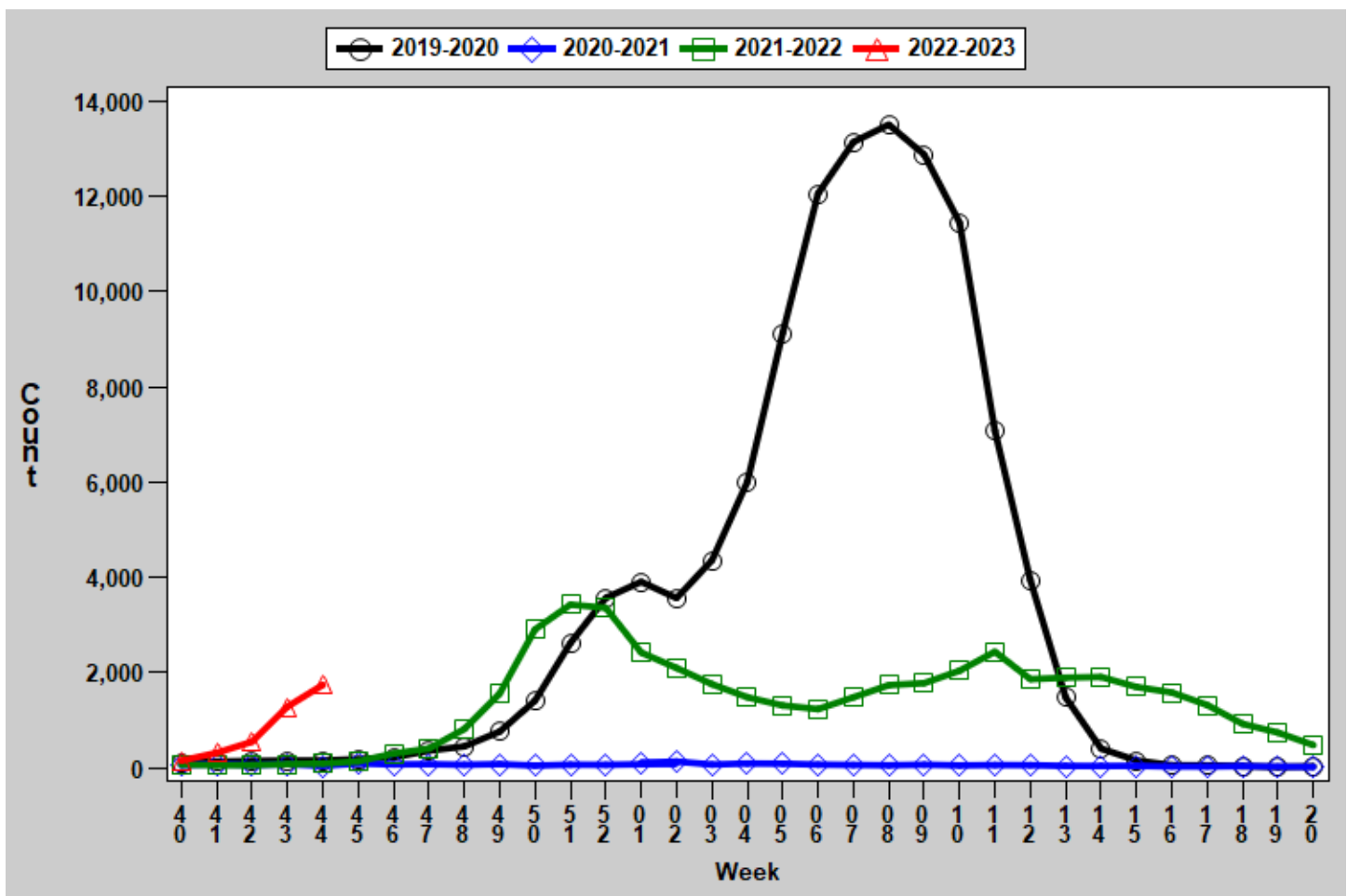Missouri, CDC Week 44 (October 30, 2022 – November 5, 2022)[*‡]**

Age Group	Week 44 Cases	Week 44 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	245	66.56	589	160.02
05-24	899	57.48	2,007	128.32
25-49	364	18.73	791	40.71
50-64	146	12.16	371	30.91
65+	84	7.91	258	24.29
Total	1,738	28.32	4,016	65.43

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
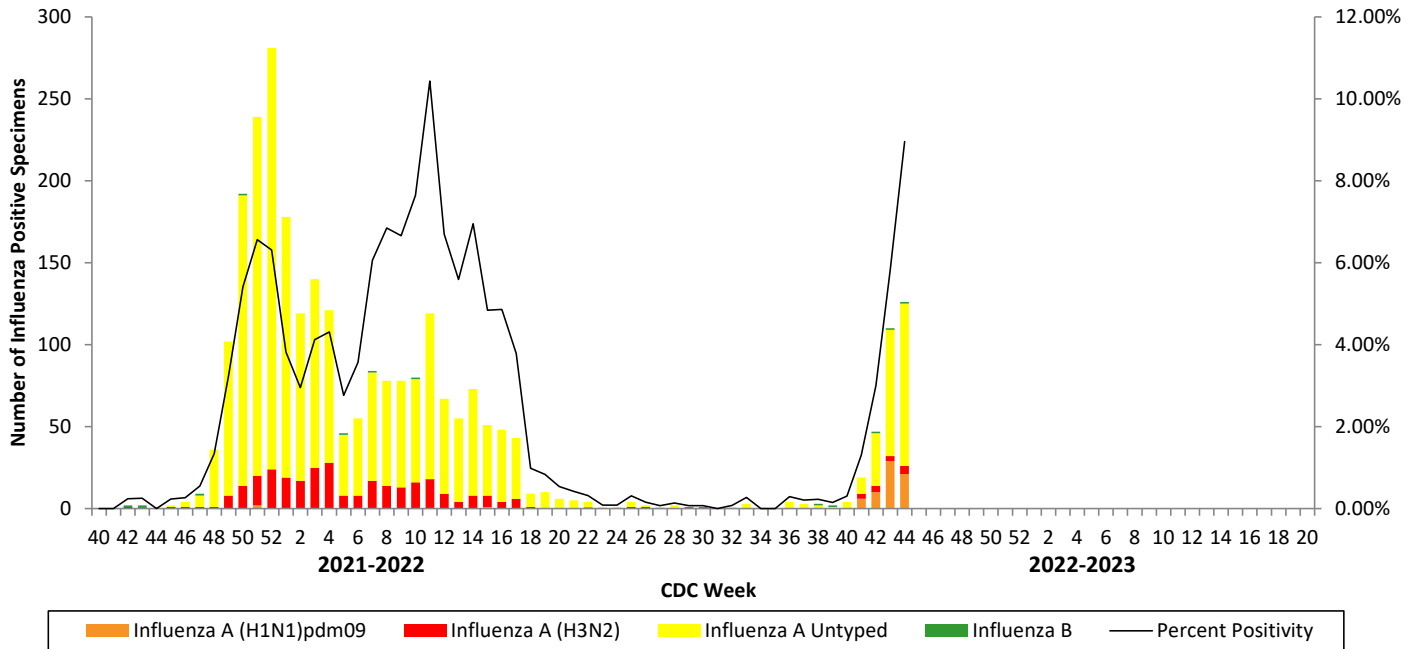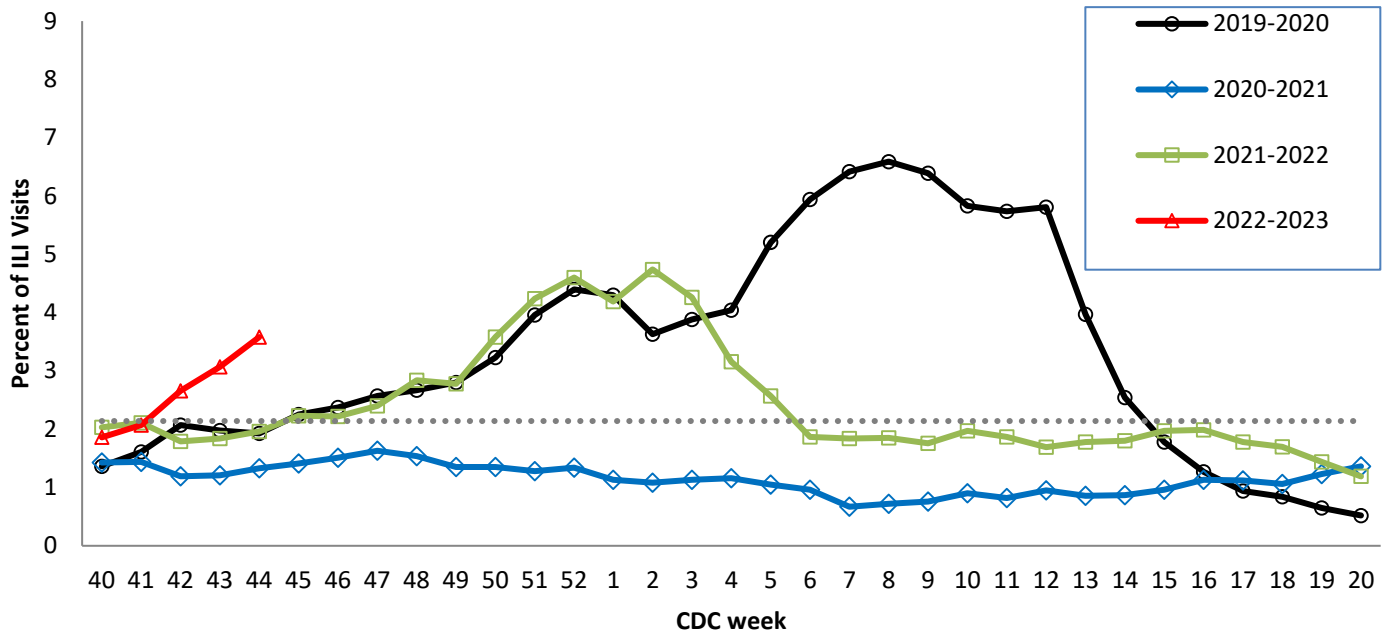[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 44 (October 30, 2022 – November 5, 2022)[*‡]

Region	Week 44 Cases	Week 44 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	92	13.63	294	43.57
Eastern	540	23.81	992	43.74
Northwest	547	33.42	1,441	88.04
Southeast	293	67.76	727	168.12
Southwest	266	25.32	562	53.49
Total	1,738	28.32	4,016	65.43

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending November 5, 2022 (Week 44).Data Source: Missouri Health Information Surveillance System (WebSurv)

Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri

Legend: Influenza A (H1N1)pdm09 · Influenza A (H3N2) · Influenza A Untyped · Influenza B · Percent Positivity
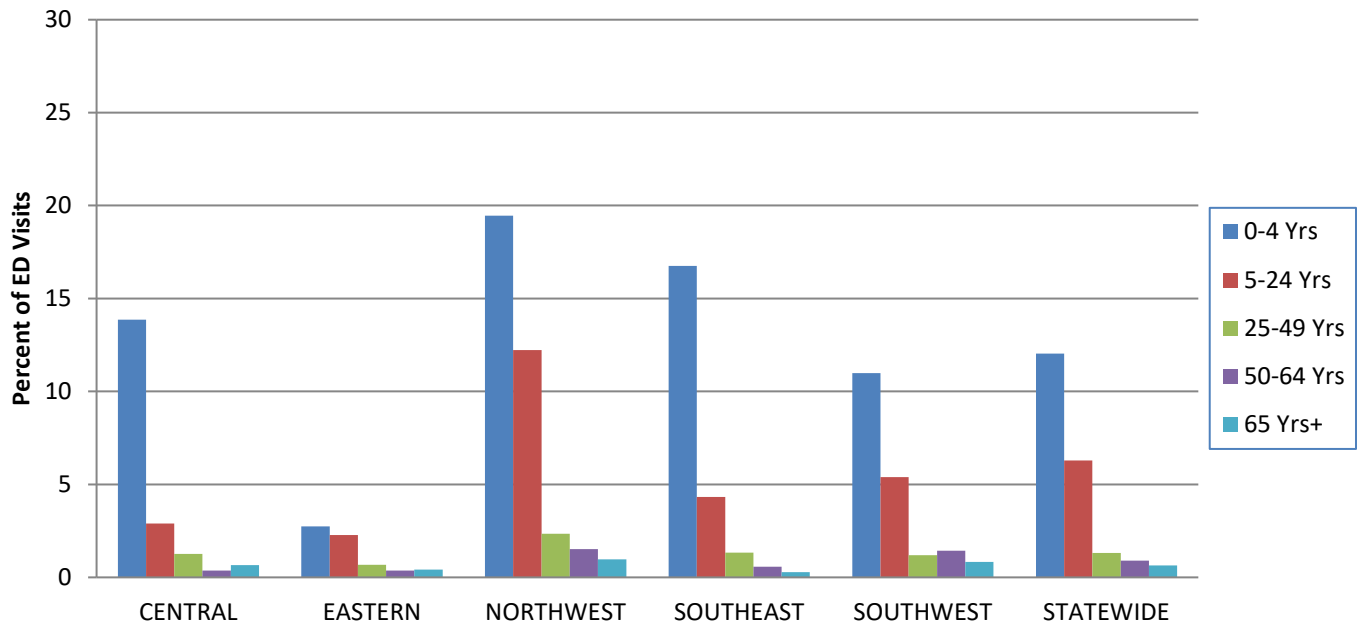
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
2022-2023 season-to-date through the week ending November 5, 2022 (Week 44).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

Legend: 2019-2020 · 2020-2021 · 2021-2022 · 2022-2023

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
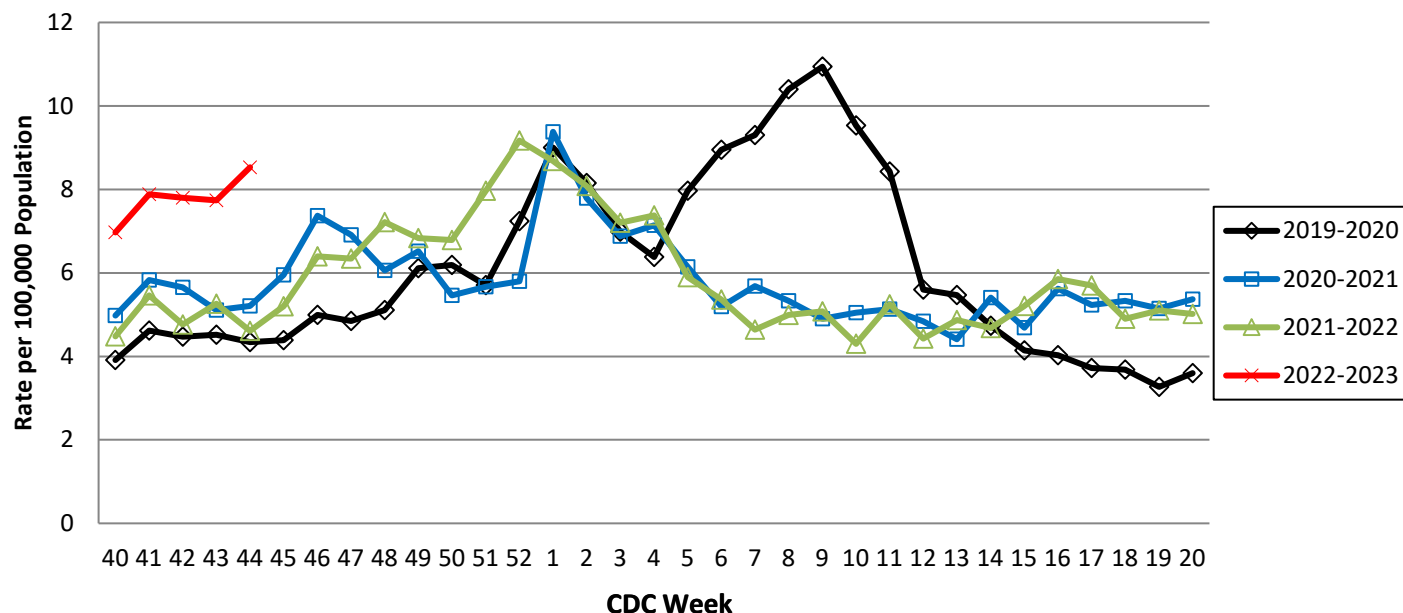
Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 44, 2022*

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
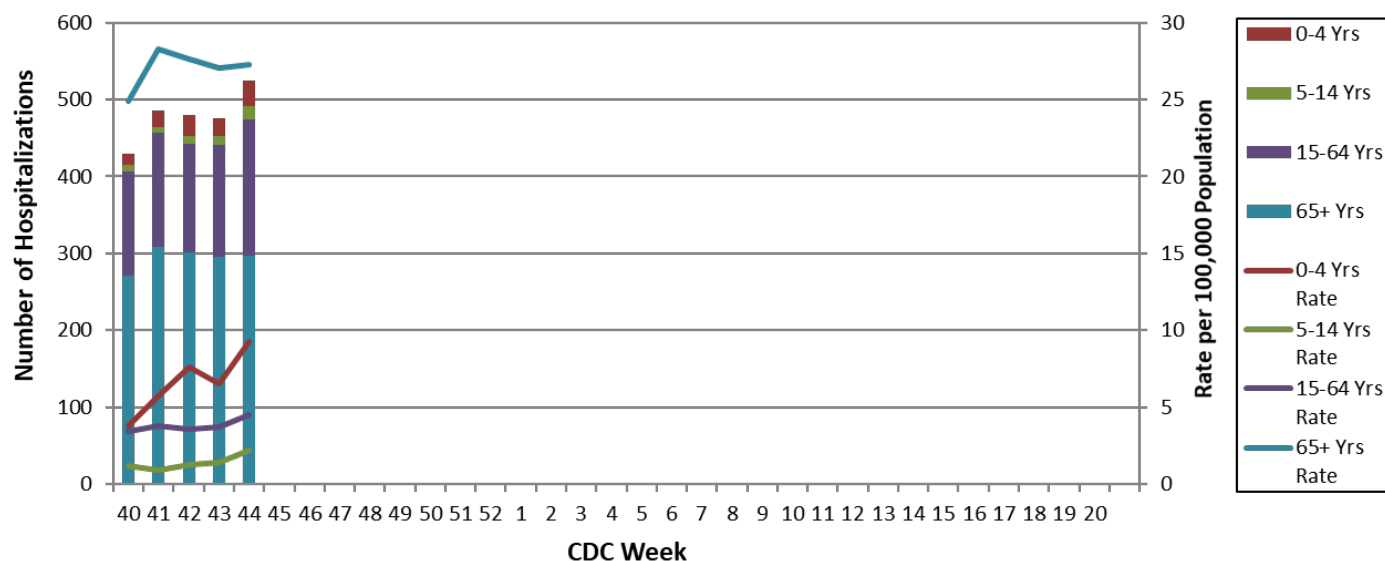*The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season*

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
*The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 9. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal. Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 10. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 44, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 45: November 6, 2022 – November 12, 2022

All data are preliminary and may change as more reports are received.

Summary:

- Influenza activity continued to increase across Missouri during Week 45. The estimated influenza activity in Missouri is now widespread[2], and the overall Influenza-like illness (ILI) activity has increased to Level 7 in the moderate category.[3]

- During Week 45, a total of 2,720 laboratory-positive[4] influenza cases (2,508 influenza A, 188 influenza B and 24 untyped) were reported. The influenza type for reported season-to-date cases includes 89.1% influenza A, 10.2% influenza B and 0.7% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) decreased slightly to 7.7% during Week 45.

- Influenza-like illness activity for Week 45 was above baseline for the hospital emergency room visit chief complaint data reported through ESSENCE. The reported percentage of visits for ILI through ESSENCE increased to 3.99 % (Figure 6).[5]

- Two influenza-associated deaths have been reported in Missouri as of Week 43[6].

- No influenza outbreaks have been reported in Missouri as of Week 45.

- Early increases in seasonal influenza activity continue nationwide, with the southeast and south-central areas of the country reporting the highest levels of activity. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Widespread is defined as: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state with recent laboratory evidence of influenza in the state.

[3] ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 45**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 45**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 43-45 (October 23, 2022 – November 12, 2022)[*]

Influenza Type	Week 43	Week 44	Week 45	2022-2023[*] Season-to-Date
Influenza A	1,150	2,260	2,508	6,654
Influenza B	142	163	188	760
Influenza Unknown Or Untyped	10	13	24	55
Total	1,302	2,436	2,720	7,469

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 45 (November 6, 2022 – November 12, 2022)[*‡]
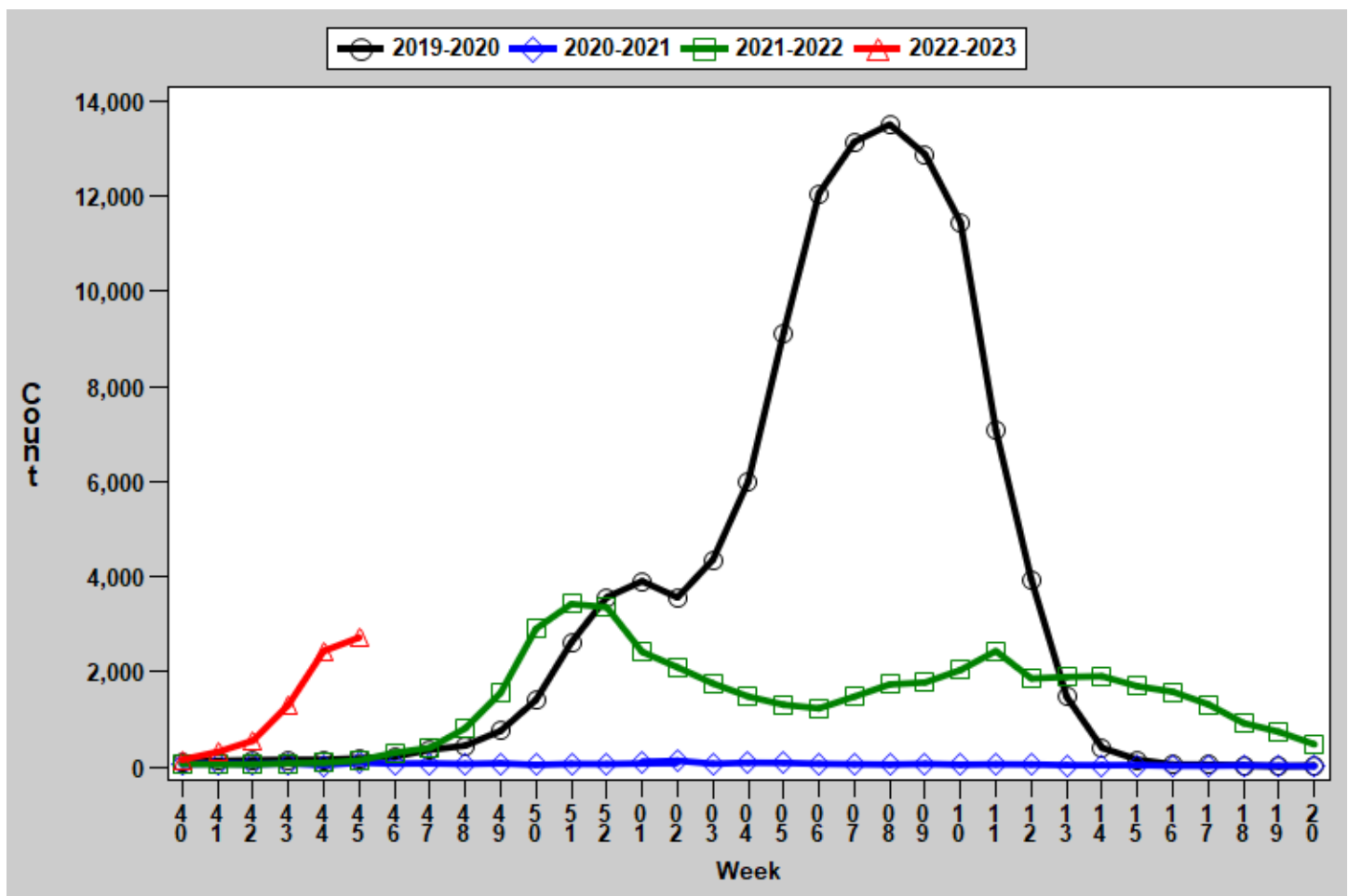
Age Group	Week 45 Cases	Week 45 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	395	107.31	1,069	290.43
05-24	1,533	98.02	3,915	250.32
25-49	482	24.81	1,437	73.95
50-64	190	15.83	625	52.07
65+	120	11.30	423	39.83
Total	2,720	44.32	7,469	121.70

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
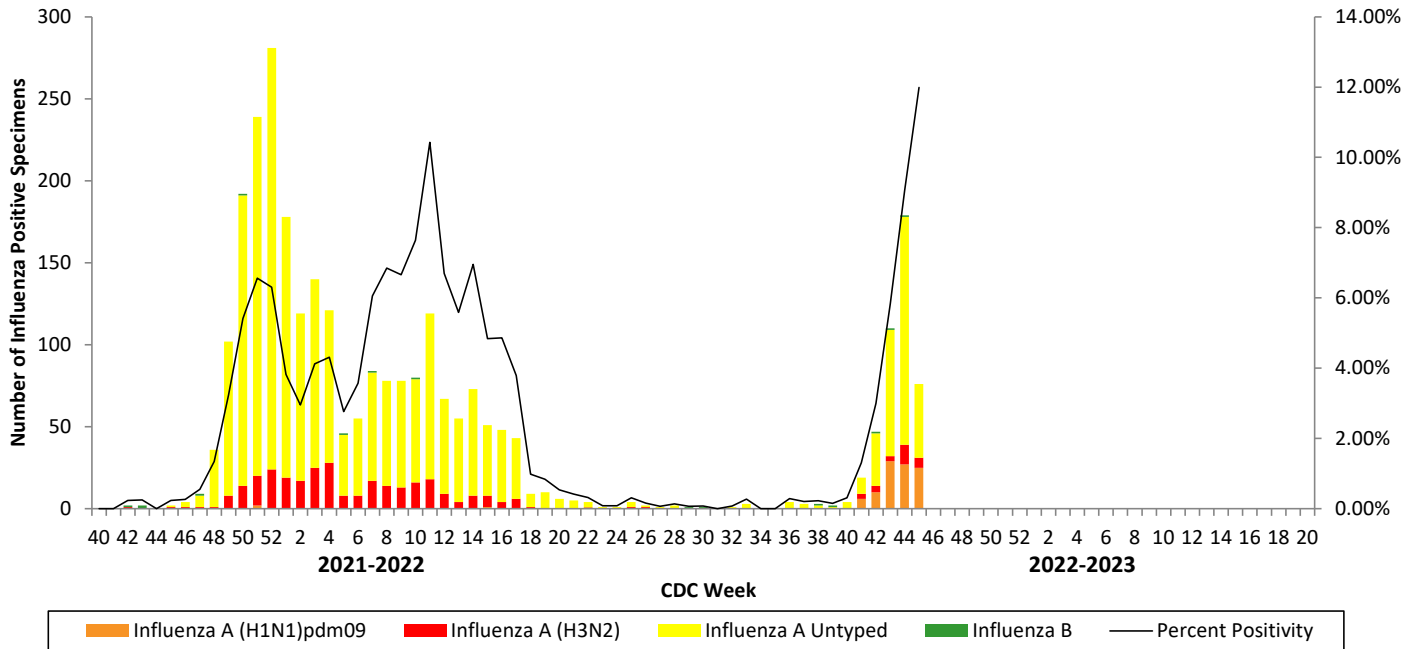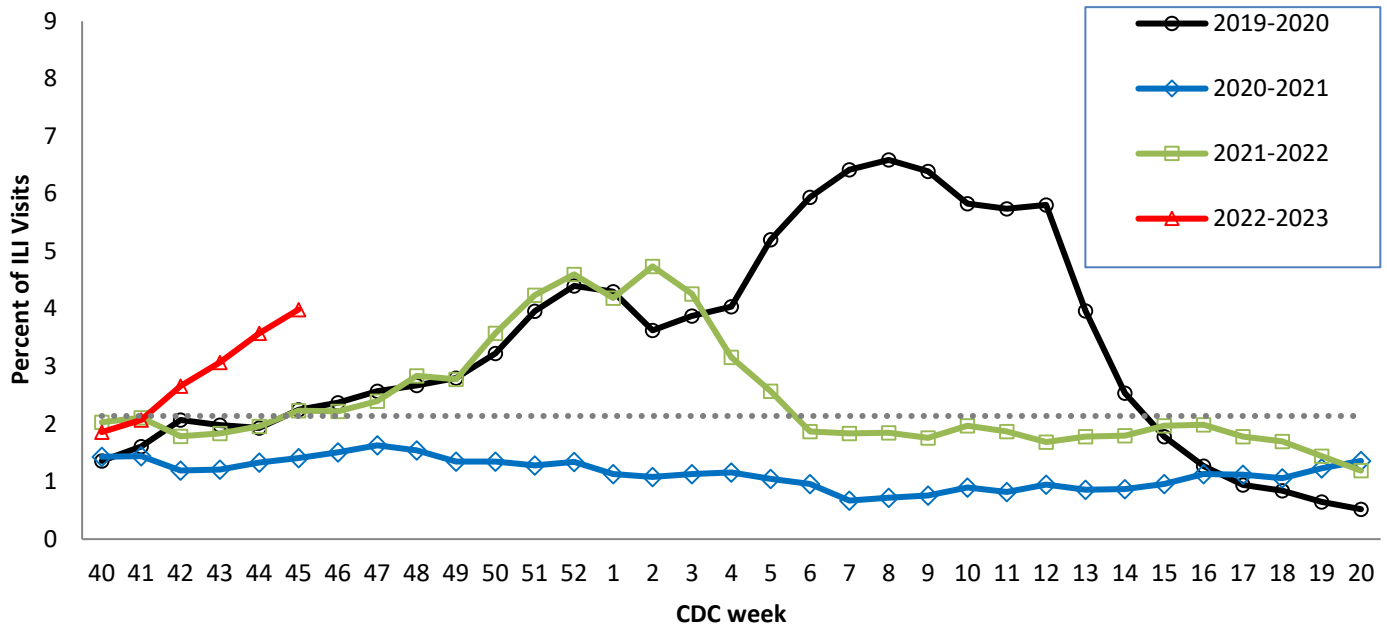[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 45 (November 6, 2022 – November 12, 2022)[*‡]

Region	Week 45 Cases	Week 45 Rate[‡]	2022-23[*] Season-to-Date	2022-23[*] Season-to-Date Rate[‡]
Central	128	18.97	441	65.35
Eastern	988	43.57	2,074	91.45
Northwest	987	60.30	2,902	177.30
Southeast	259	59.89	1,077	249.05
Southwest	358	34.07	975	92.80
Total	2,720	44.32	7,469	121.70

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending November 12, 2022 (Week 45).Data Source: Missouri Health Information Surveillance System (WebSurv)

Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri

Legend: Influenza A (H1N1)pdm09 | Influenza A (H3N2) | Influenza A Untyped | Influenza B | Percent Positivity
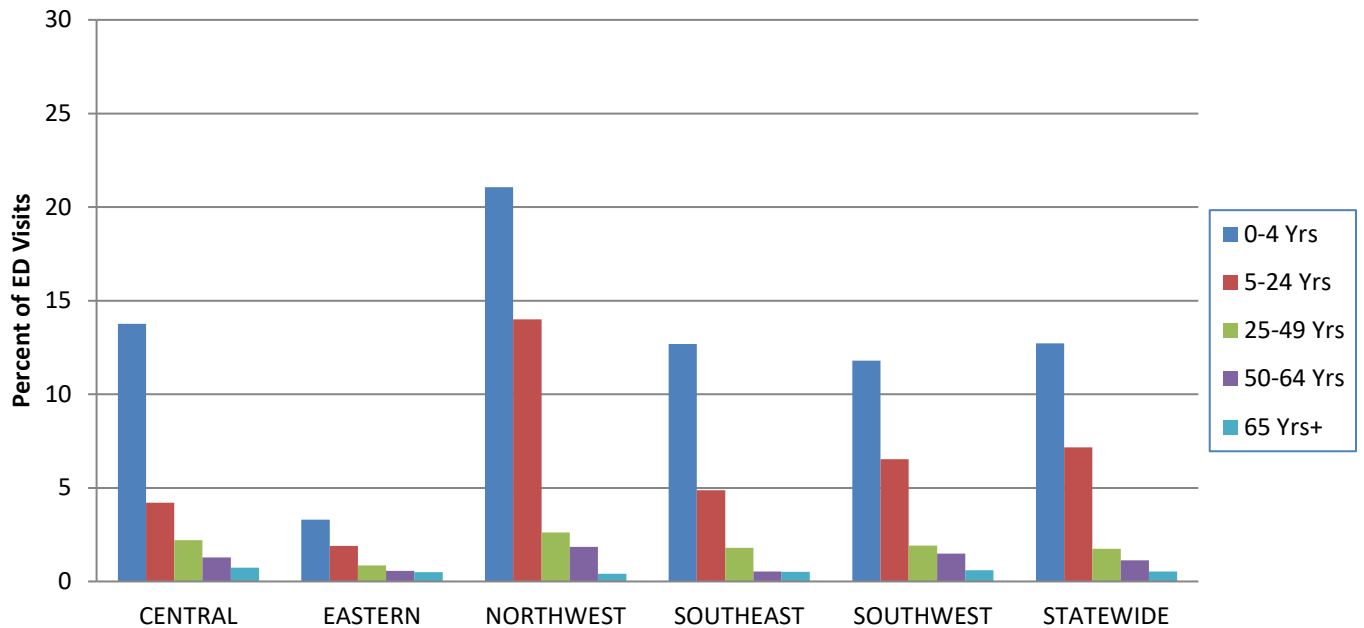
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
2022-2023 season-to-date through the week ending November 12, 2022 (Week 45).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 45, 2022[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
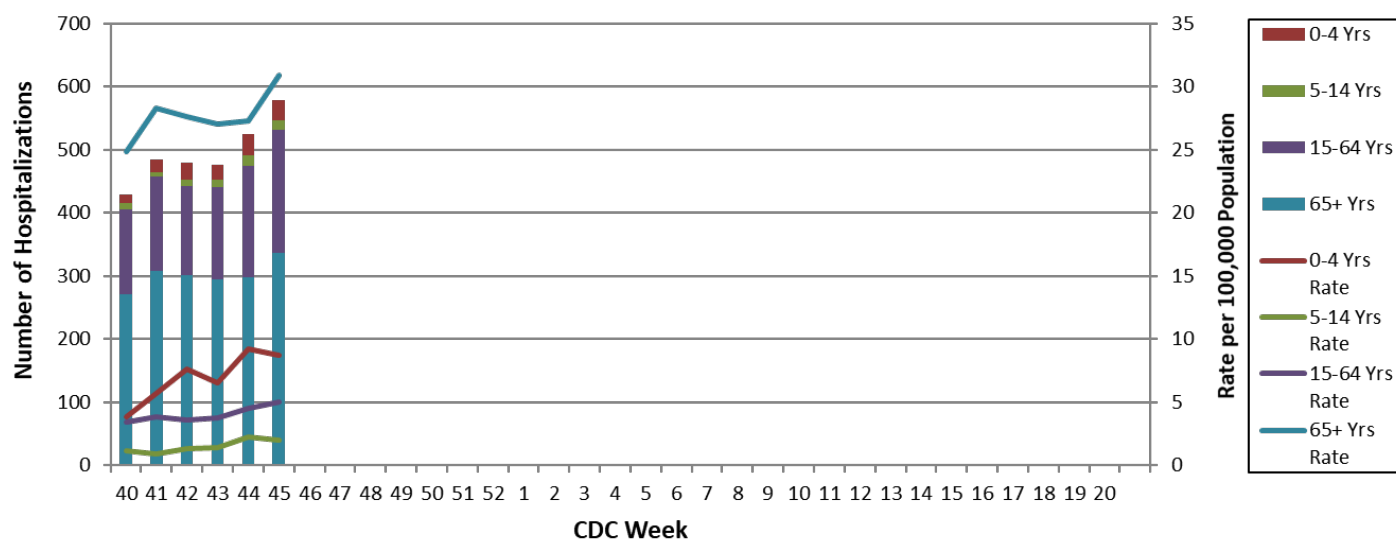[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

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Figure 9. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal. Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 10. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 45, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 46: November 13, 2022 – November 19, 2022

All data are preliminary and may change as more reports are received.

Summary:

- Influenza activity continued to increase across Missouri during Week 46. The estimated influenza activity in Missouri is now widespread[2], and the overall Influenza-like illness (ILI) activity has increased to Level 9 in the high category.[3]

- During Week 46, a total of 4,893 laboratory-positive[4] influenza cases (4,559 influenza A, 258 influenza B and 76 untyped) were reported. The influenza type for reported season-to-date cases includes 90.8% influenza A, 8.2% influenza B and 1.0% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) increased to 12.3% during Week 46.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE continued to increase during week 46. The reported percentage of visits for ILI through ESSENCE increased to 4.70 % (Figure 6).[5]

- Three influenza-associated deaths have been reported in Missouri as of Week 44[6].

- No influenza outbreaks have been reported in Missouri as of Week 46.

- Seasonal influenza activity continues to increase nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Widespread is defined as: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state with recent laboratory evidence of influenza in the state.

[3]ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. Click on the jurisdiction to view the influenza data specific to that jurisdiction.

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 46**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 46**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 44-46 (October 30, 2022 – November 19, 2022)[*]

Influenza Type	Week 44	Week 45	Week 46	2022-2023[*] Season-to-Date
Influenza A	2,373	3,557	4,559	12,417
Influenza B	181	258	258	1,117
Influenza Unknown Or Untyped	16	32	76	142
Total	2,570	3,847	4,893	13,676

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 46 (November 13, 2022 – November 19, 2022)[*‡]
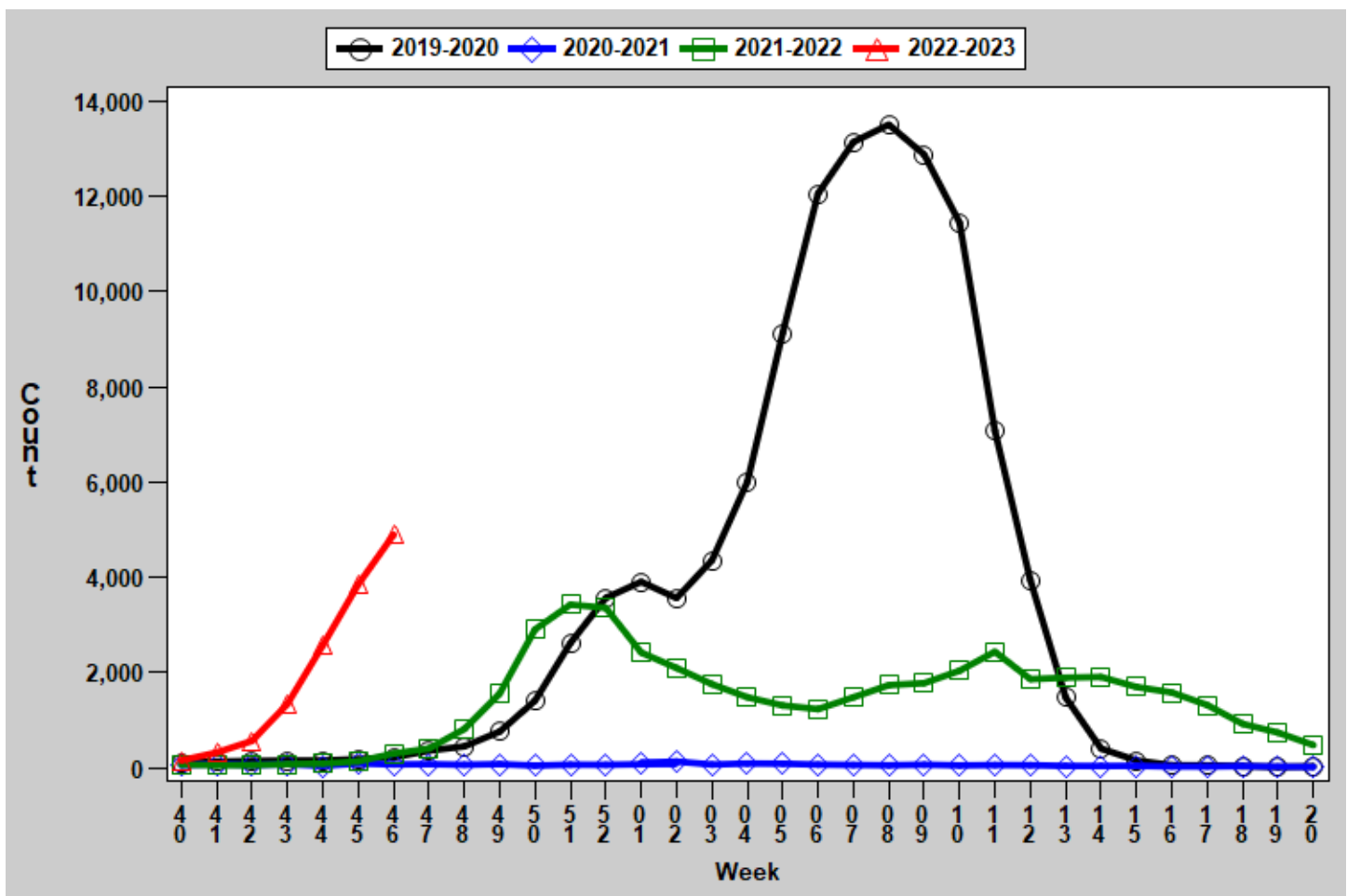
Age Group	Week 46 Cases	Week 46 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	716	194.52	1,977	537.11
05-24	2,616	167.26	7,151	457.22
25-49	895	46.06	2,620	134.84
50-64	363	30.24	1,101	91.73
65+	303	28.53	827	77.87
Total	4,893	79.72	13,676	222.83

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
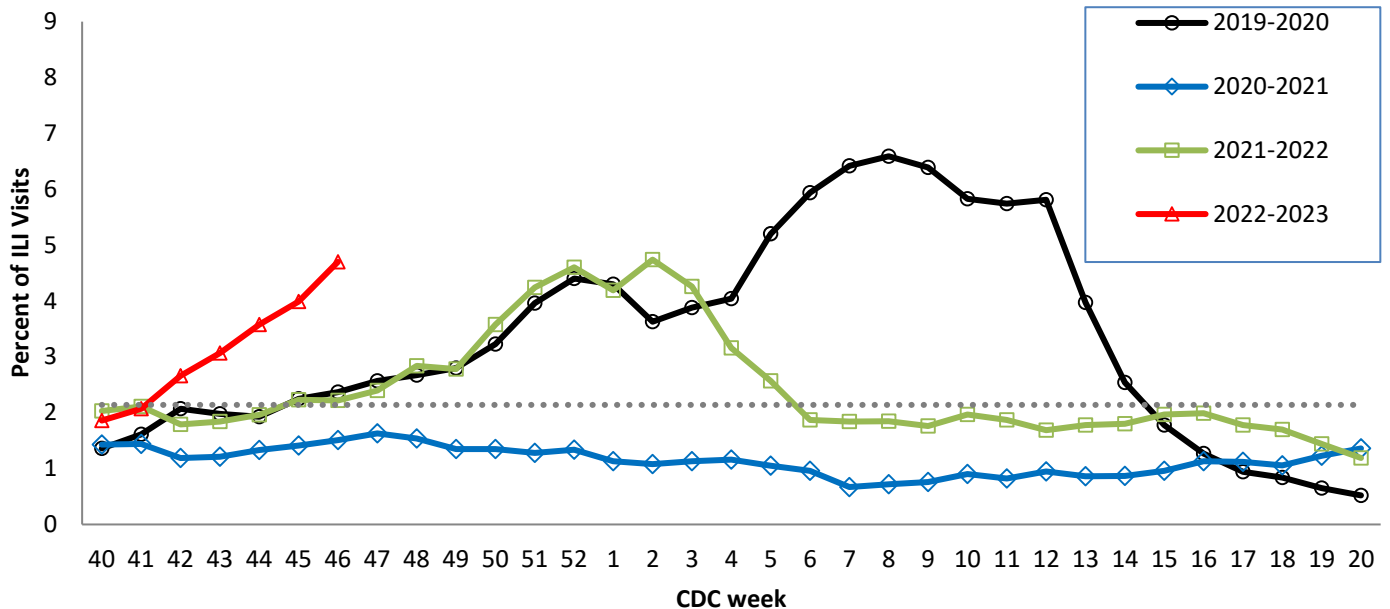[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 46 (November 13, 2022 – November 19, 2022)[*‡]

Region	Week 46 Cases	Week 46 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	195	28.90	691	102.40
Eastern	1,363	60.10	3,505	154.56
Northwest	2,456	150.05	6,282	383.87
Southeast	492	113.77	1,802	416.71
Southwest	387	36.84	1,395	132.78
Total	4,893	79.72	13,676	222.83

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending November 19, 2022 (Week 46).Data Source: Missouri Health Information Surveillance System (WebSurv)

Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri
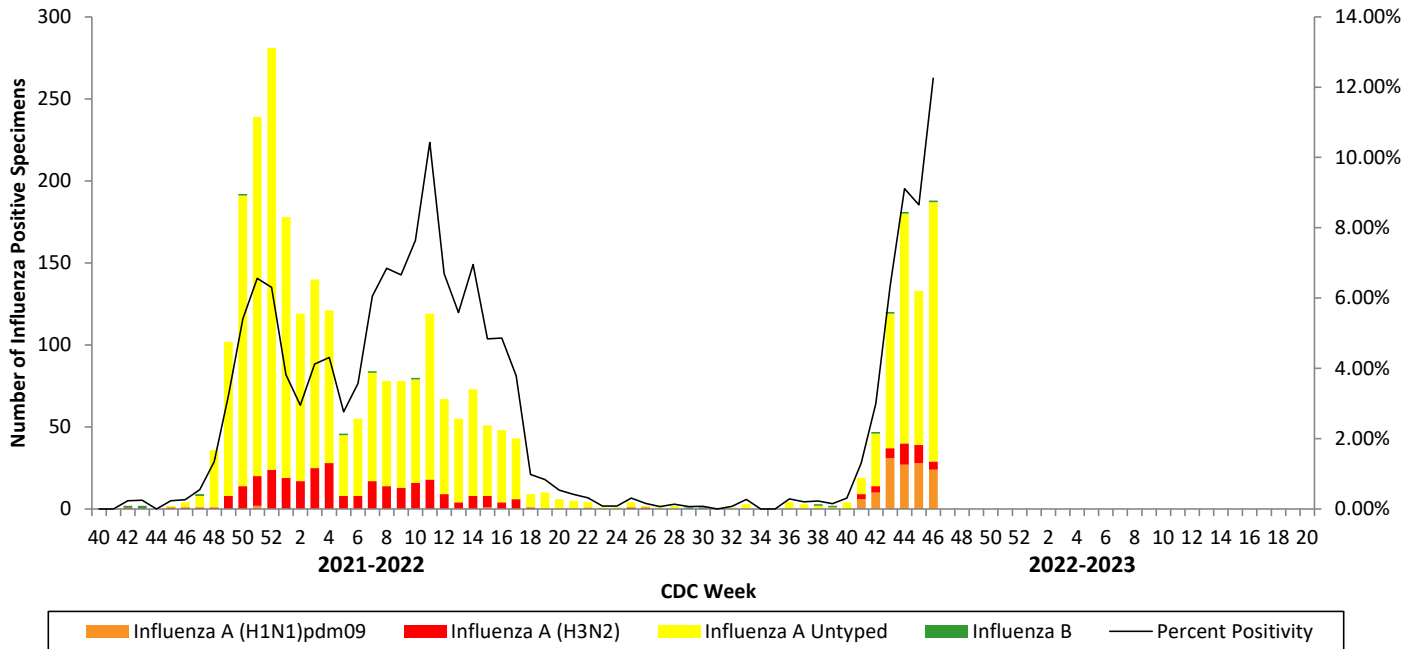
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
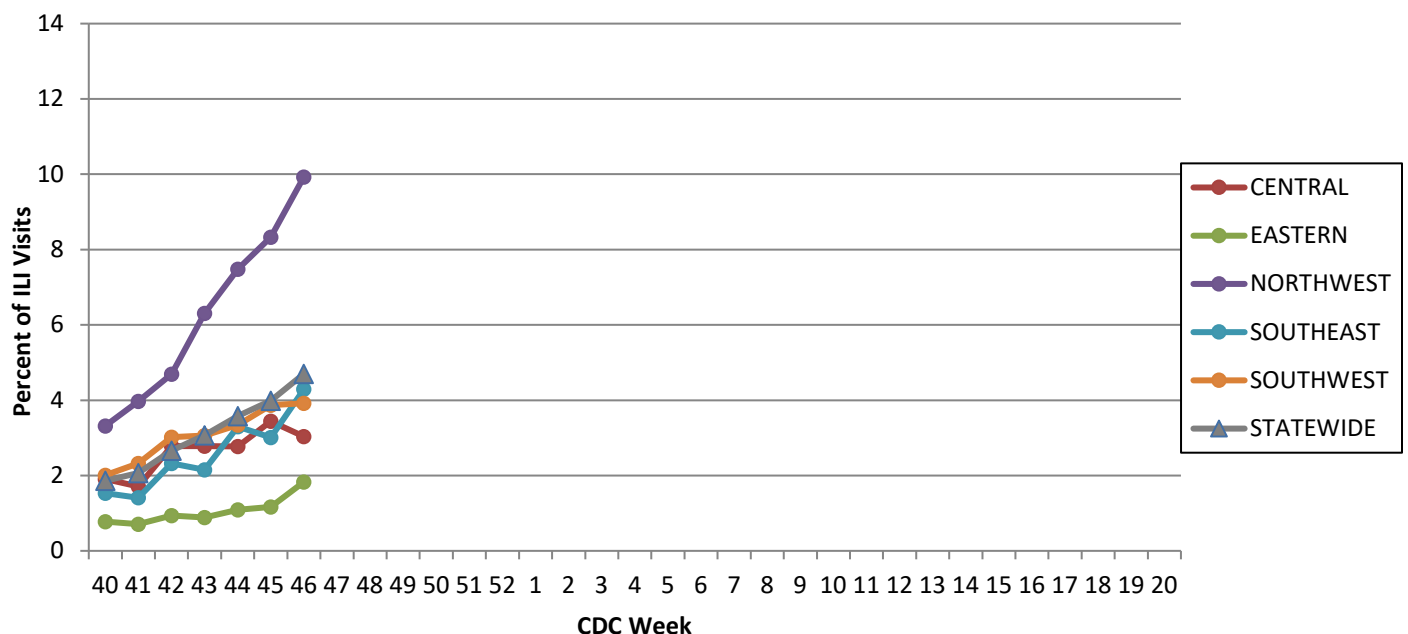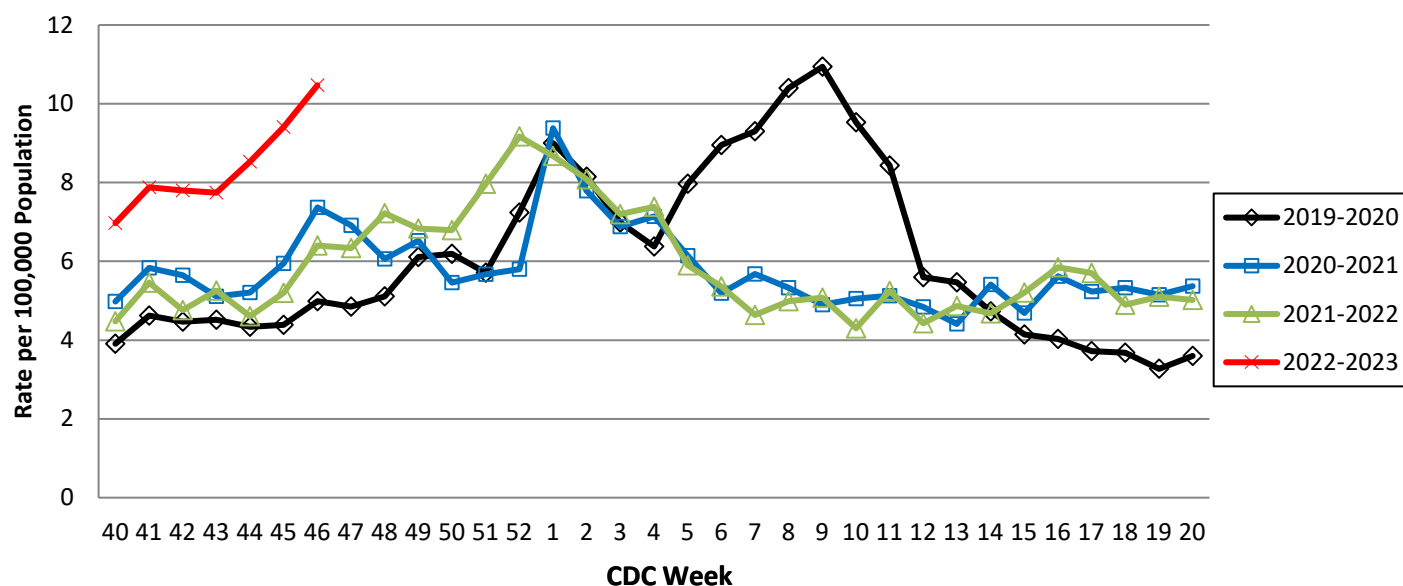2022-2023 season-to-date through the week ending November 19, 2022 (Week 46).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 46, 2022[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
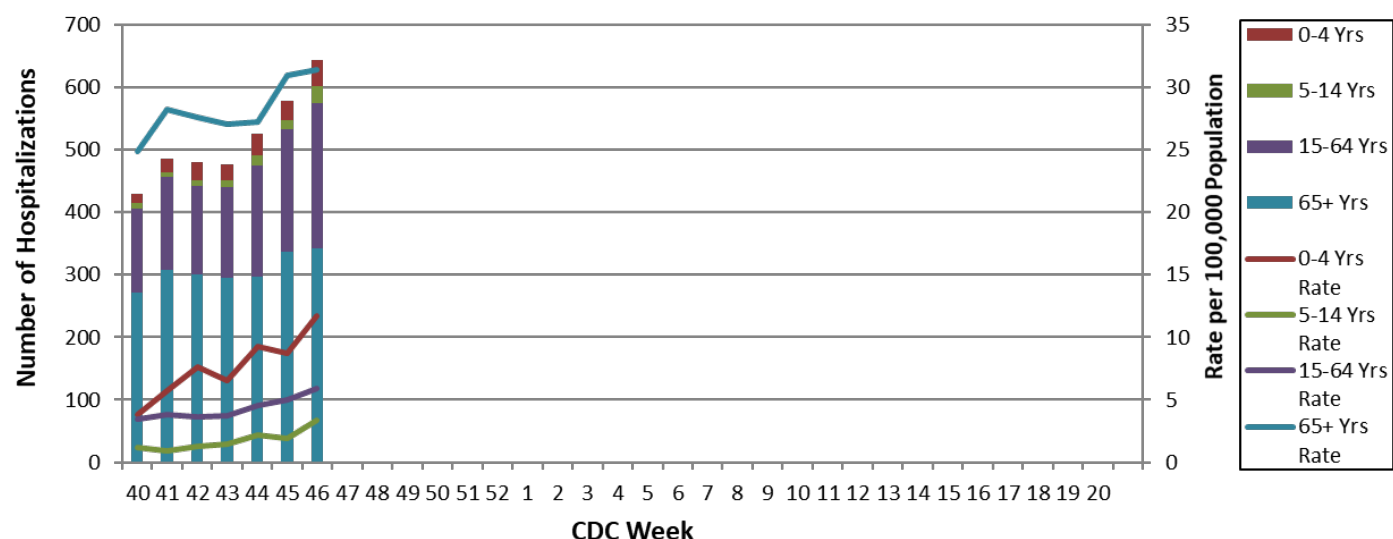[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 9. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal. Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 10. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 46, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 47: November 20, 2022 – November 26, 2022

All data are preliminary and may change as more reports are received.

Summary:

- Influenza activity continued to increase across Missouri during Week 47. The estimated influenza activity in Missouri is now widespread[2], and the overall Influenza-like illness (ILI) activity has increased to Level 11 in the very high category.[3]

- During Week 47, a total of 8,256 laboratory-positive[4] influenza cases (7,995 influenza A, 244 influenza B and 17 untyped) were reported. The influenza type for reported season-to-date cases includes 92.9% influenza A, 6.4% influenza B and 0.7% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) increased to 29.9% during Week 47.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE continued to increase during week 47. The reported percentage of visits for ILI through ESSENCE increased to 6.57 % (Figure 6).[5]

- Four influenza-associated deaths have been reported in Missouri as of Week 45[6].

- No influenza outbreaks have been reported in Missouri as of Week 47.

- Seasonal influenza activity continues to increase nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1] The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2] Widespread is defined as: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state with recent laboratory evidence of influenza in the state.

[3] ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4] Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5] ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6] Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. Click on the jurisdiction to view the influenza data specific to that jurisdiction.

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 47**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 47**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 45-47 (November 6, 2022 – November 26, 2022)[*]

Influenza Type	Week 45	Week 46	Week 47	2022-2023[*] Season-to-Date
Influenza A	3,786	5,395	7,995	21,822
Influenza B	280	314	244	1,511
Influenza Unknown Or Untyped	33	76	17	162
Total	4,099	5,785	8,256	23,495

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 47 (November 20, 2022 – November 26, 2022)[*‡]
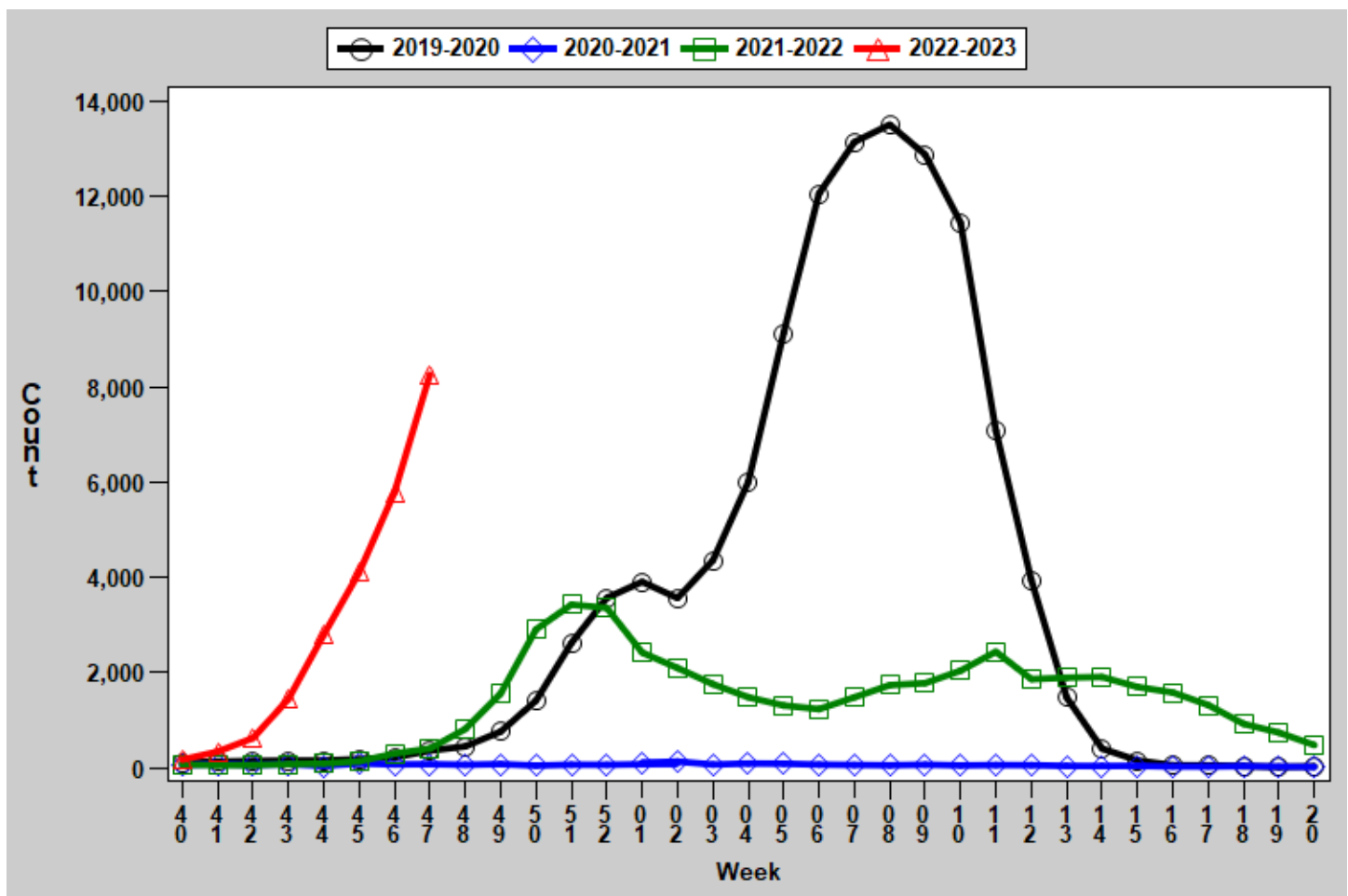
Age Group	Week 47 Cases	Week 47 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	1,094	297.22	3,252	883.50
05-24	4,240	271.10	12,167	777.94
25-49	1,551	79.82	4,516	232.41
50-64	741	61.74	1,992	165.97
65+	630	59.32	1,568	147.64
Total	8,256	134.52	23,495	382.82

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
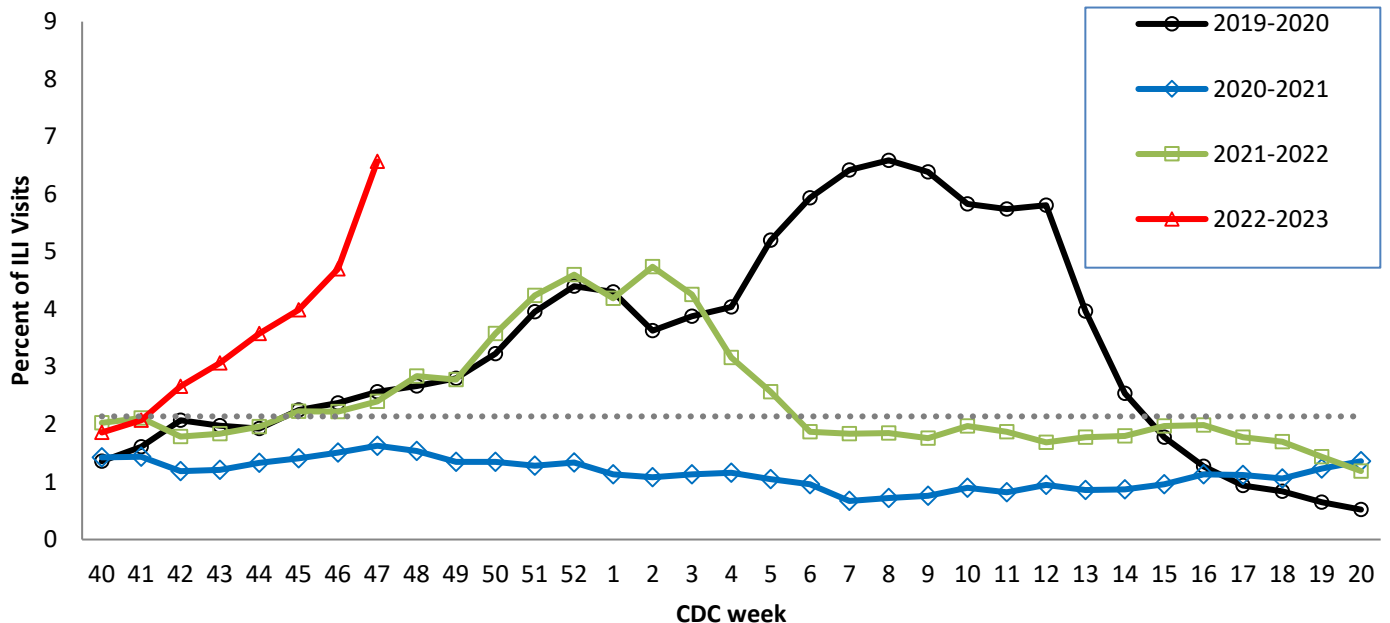[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 47 (November 20, 2022 – November 26, 2022)[*‡]

Region	Week 47 Cases	Week 47 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	585	86.69	1,384	205.09
Eastern	2,739	120.78	6,954	306.64
Northwest	2,692	164.47	9,175	560.57
Southeast	723	167.19	2,768	640.09
Southwest	1,517	144.39	3,214	305.91
Total	8,256	134.52	23,495	382.82

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending November 26, 2022 (Week 47).Data Source: Missouri Health Information Surveillance System (WebSurv)

Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri
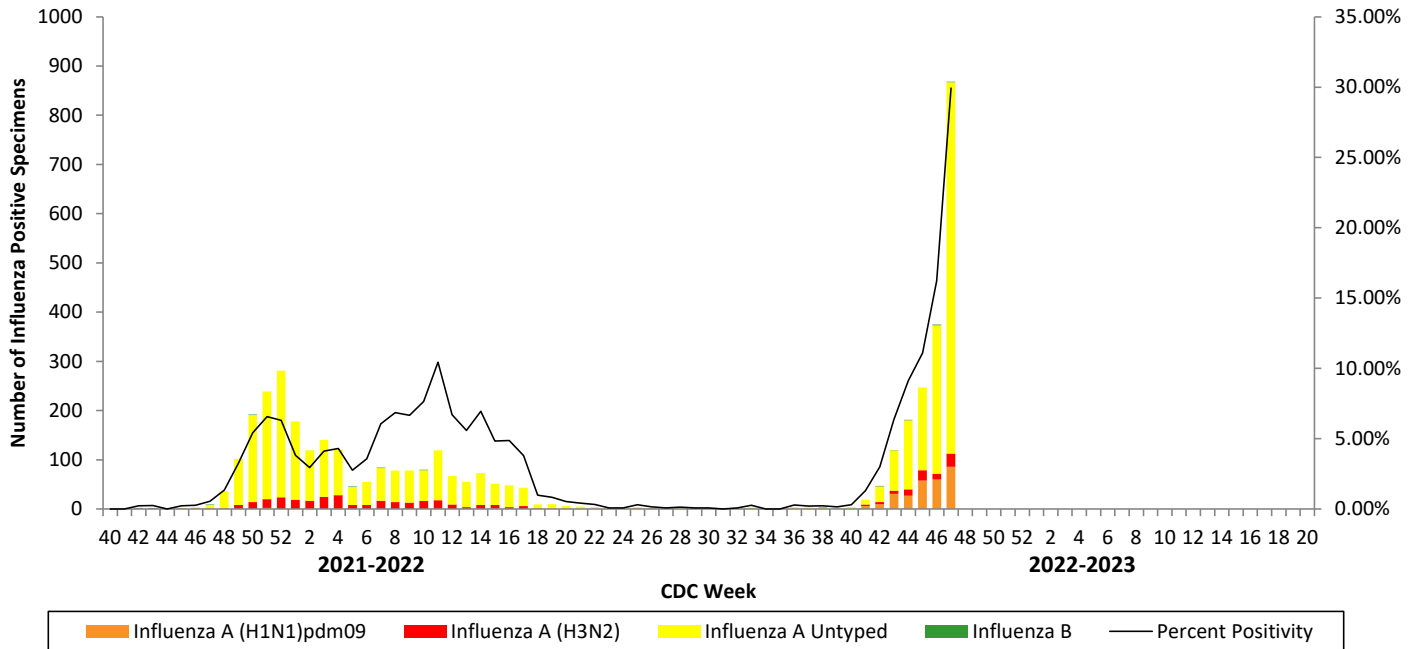
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
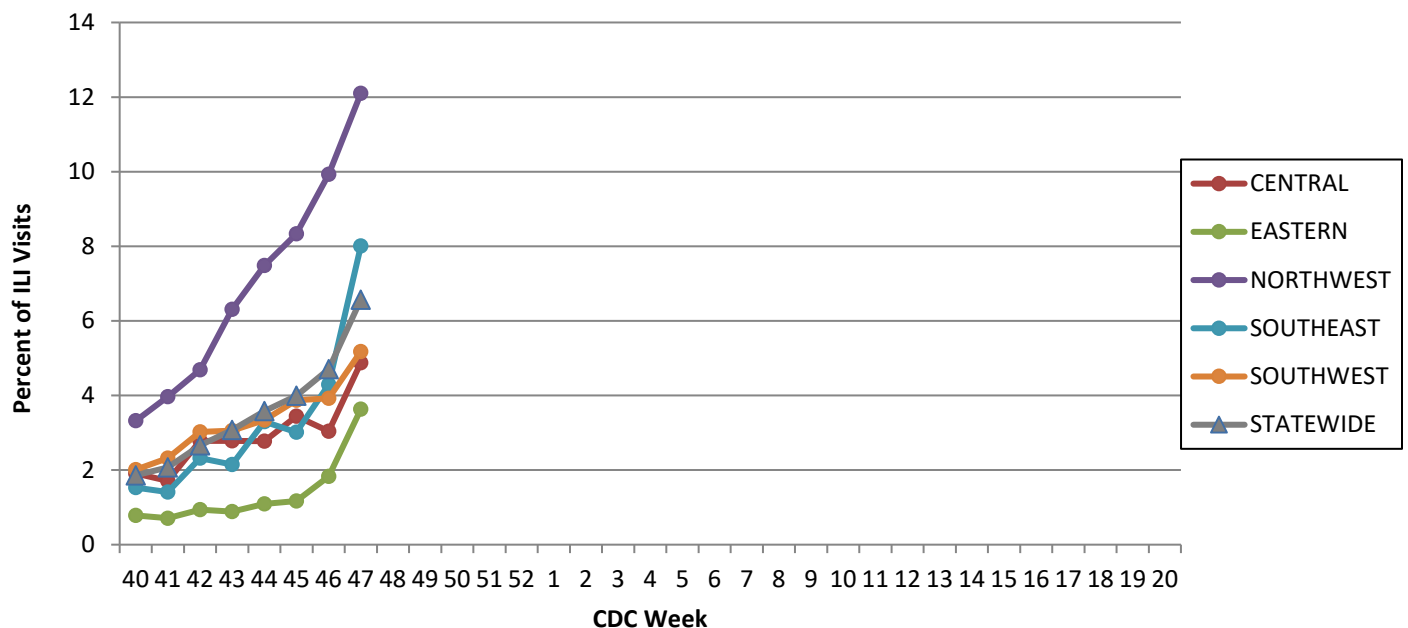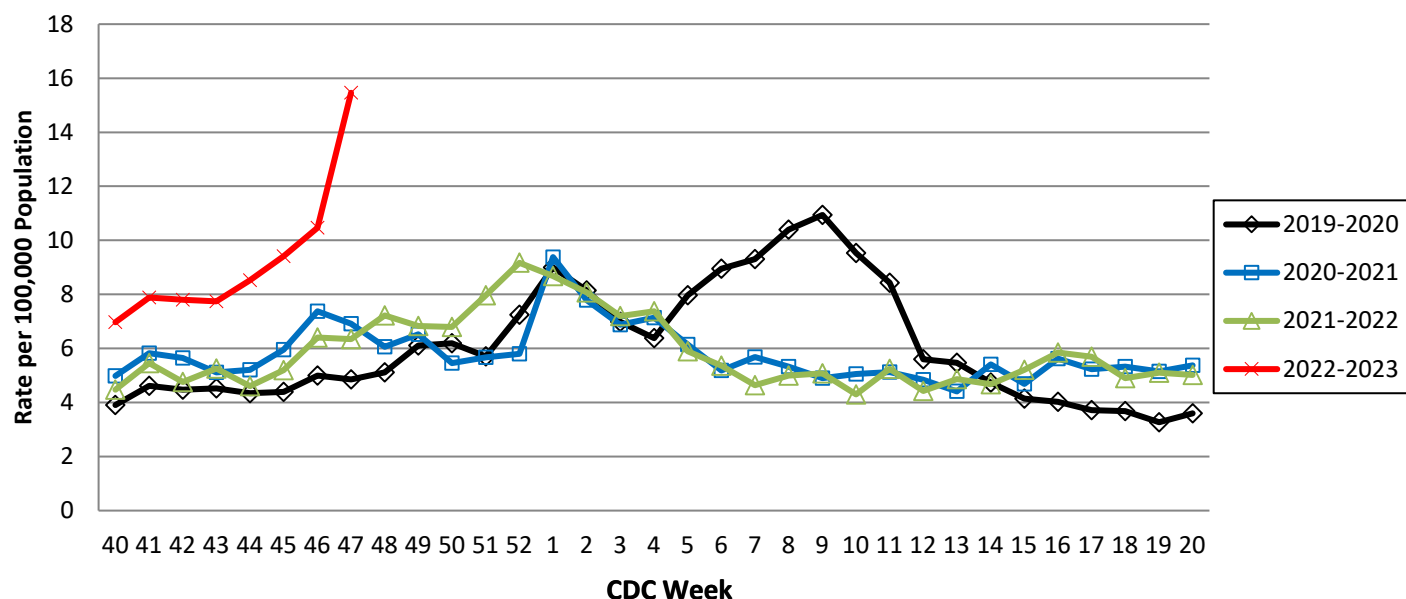2022-2023 season-to-date through the week ending November 26, 2022 (Week 47).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 47, 2022[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 9. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal.
Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 10. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 47, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 48: November 27, 2022 – December 3, 2022

All data are preliminary and may change as more reports are received.

Summary:

- Influenza activity remains high across Missouri. The estimated influenza activity for Week 48 is widespread[2], and the overall Influenza-like illness (ILI) activity remains at Level 11 in the very high category.[3]

- During Week 48, a total of 10,896 laboratory-positive[4] influenza cases (10,593 influenza A, 263 influenza B and 40 untyped) were reported. The influenza type for reported season-to-date cases includes 97.2% influenza A, 2.4% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) is 26.6% Week 48.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE decreased slightly during Week 48. The reported percentage of visits for ILI through ESSENCE increased to 6.30 % (Figure 6).[5]

- Five influenza-associated deaths have been reported in Missouri as of Week 46[6].

- Four influenza outbreaks have been reported in Missouri as of Week 48.

- Seasonal influenza activity continues to be high nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Widespread is defined as: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state with recent laboratory evidence of influenza in the state.

[3] ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at
https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 48**

- **Reported Week-specific Rate per 100,000 Population, CDC Week 48**

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**

- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 46-48 (November 13, 2022 – December 3, 2022)[*]

Influenza Type	Week 46	Week 47	Week 48	2022-2023[*] Season-to-Date
Influenza A	5,534	10,802	10,593	35,387
Influenza B	321	303	263	1,846
Influenza Unknown Or Untyped	76	33	40	219
Total	5,931	11,138	10,896	37,452

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 48 (November 27, 2022 – December 3, 2022)[*‡]
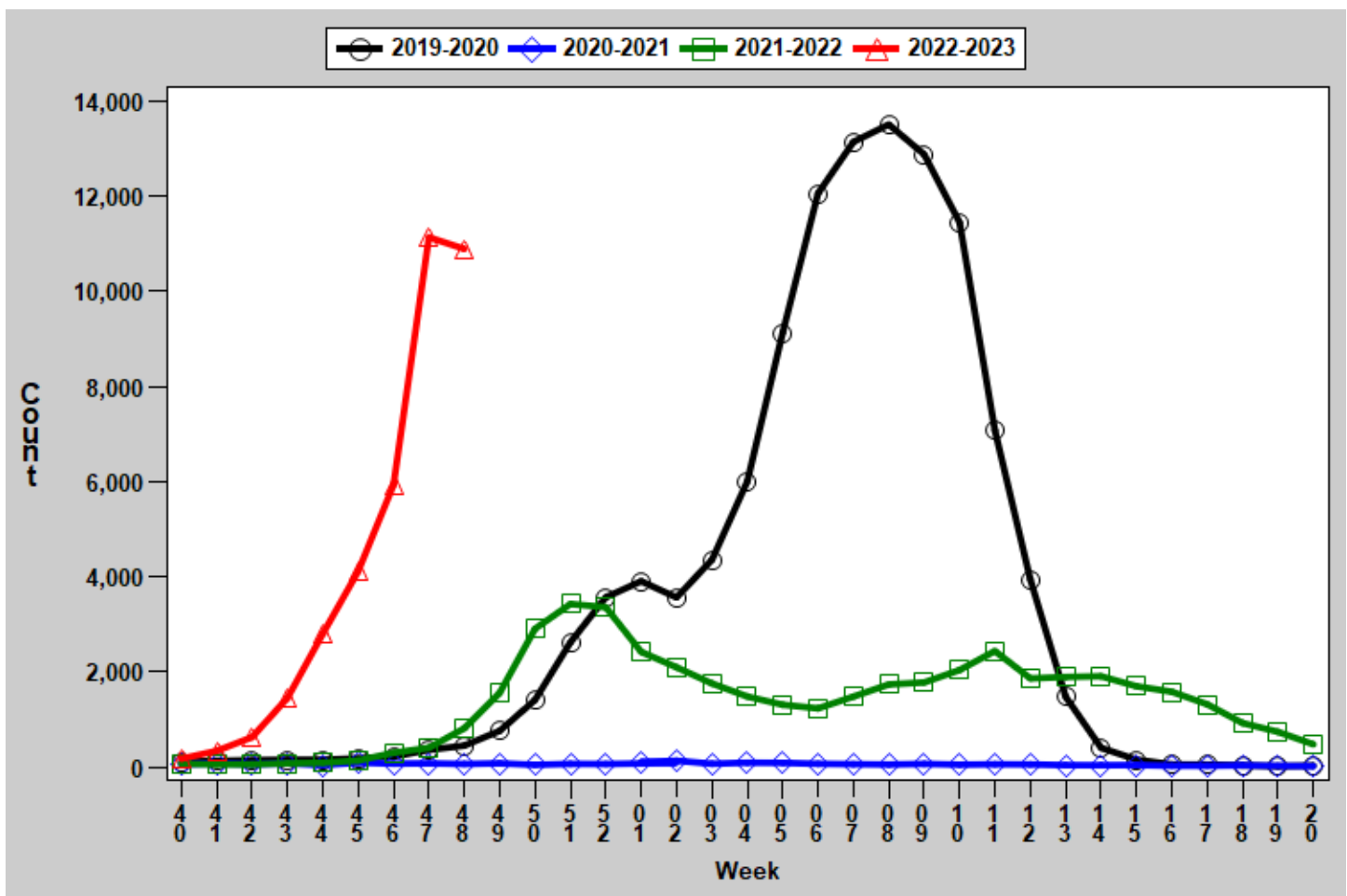
Age Group	Week 48 Cases	Week 48 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	1,699	461.58	5,284	1,435.56
05-24	4,518	288.87	18,046	1,153.83
25-49	2,371	122.02	7,584	390.31
50-64	1,195	99.57	3,521	293.37
65+	1,113	104.80	3,017	284.08
Total	10,896	177.53	37,452	610.22

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
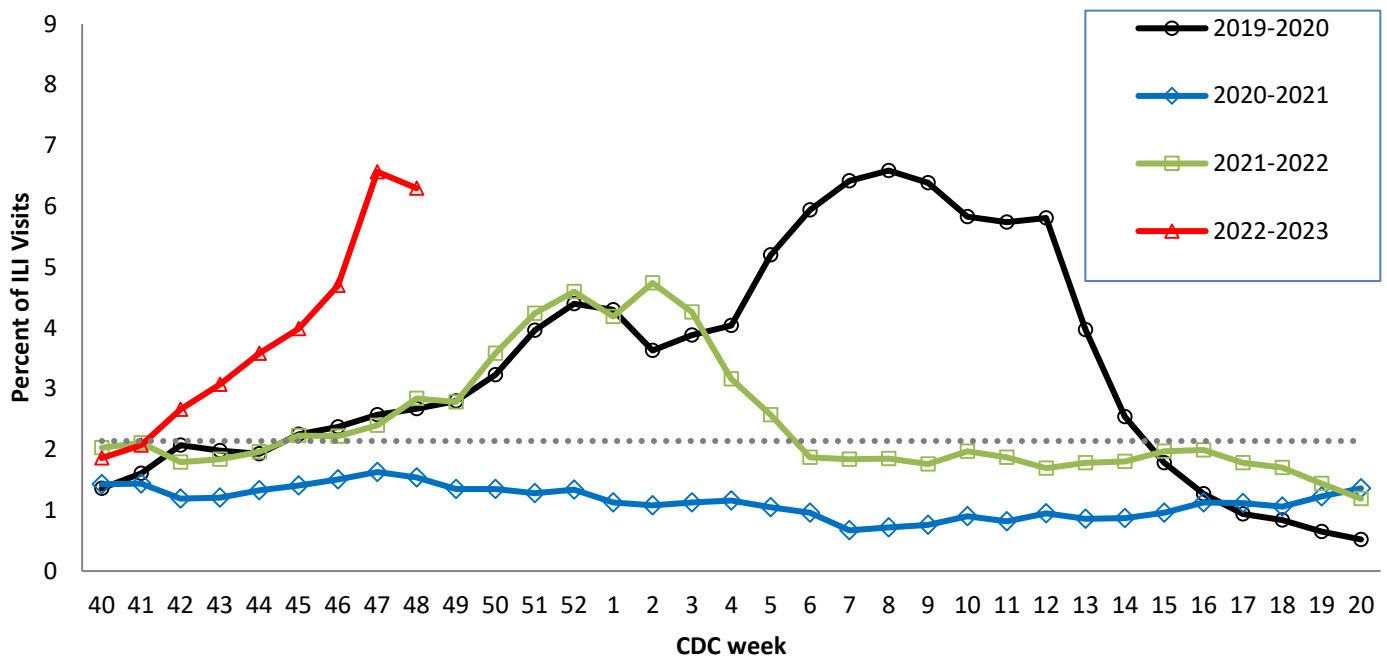[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 48 (November 27, 2022 – December 3, 2022)[*‡]

Region	Week 48 Cases	Week 48 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	843	124.92	2,306	341.72
Eastern	4,417	194.77	11,850	522.54
Northwest	2,798	170.95	13,725	838.56
Southeast	1,406	325.13	4,557	1,053.79
Southwest	1,432	136.30	5,014	477.24
Total	10,896	177.53	37,452	610.22

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending December 3, 2022 (Week 48).Data Source: Missouri Health Information Surveillance System (WebSurv)

Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri
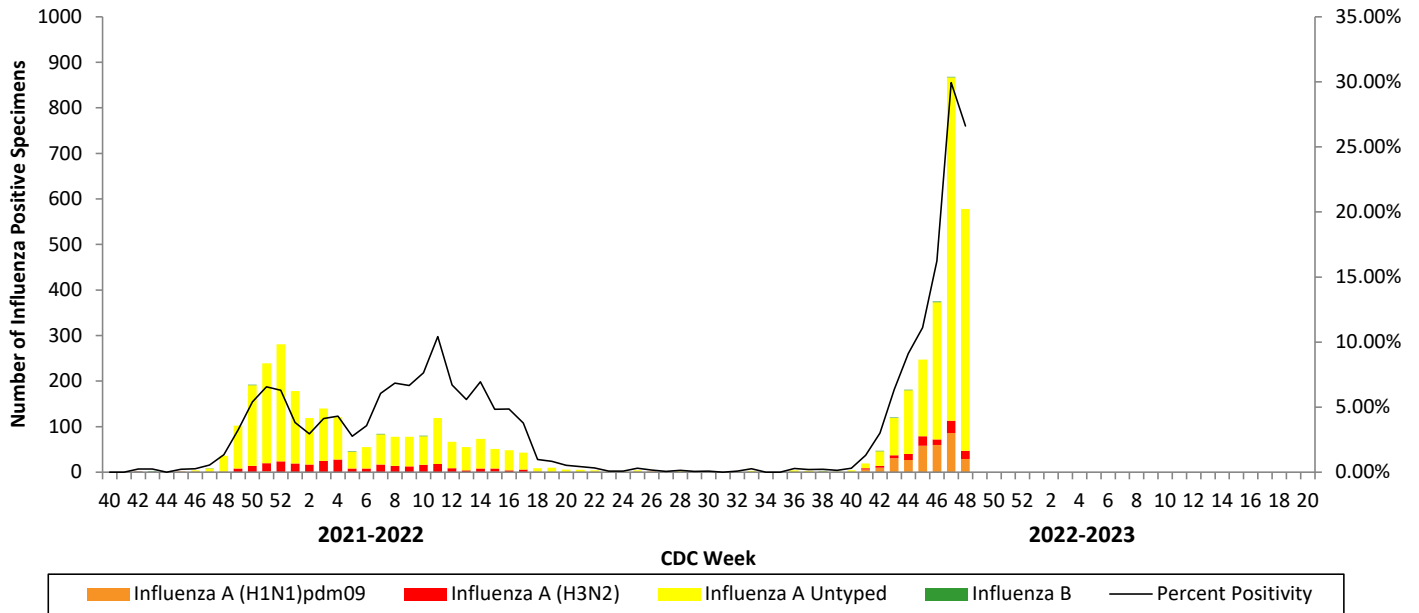
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
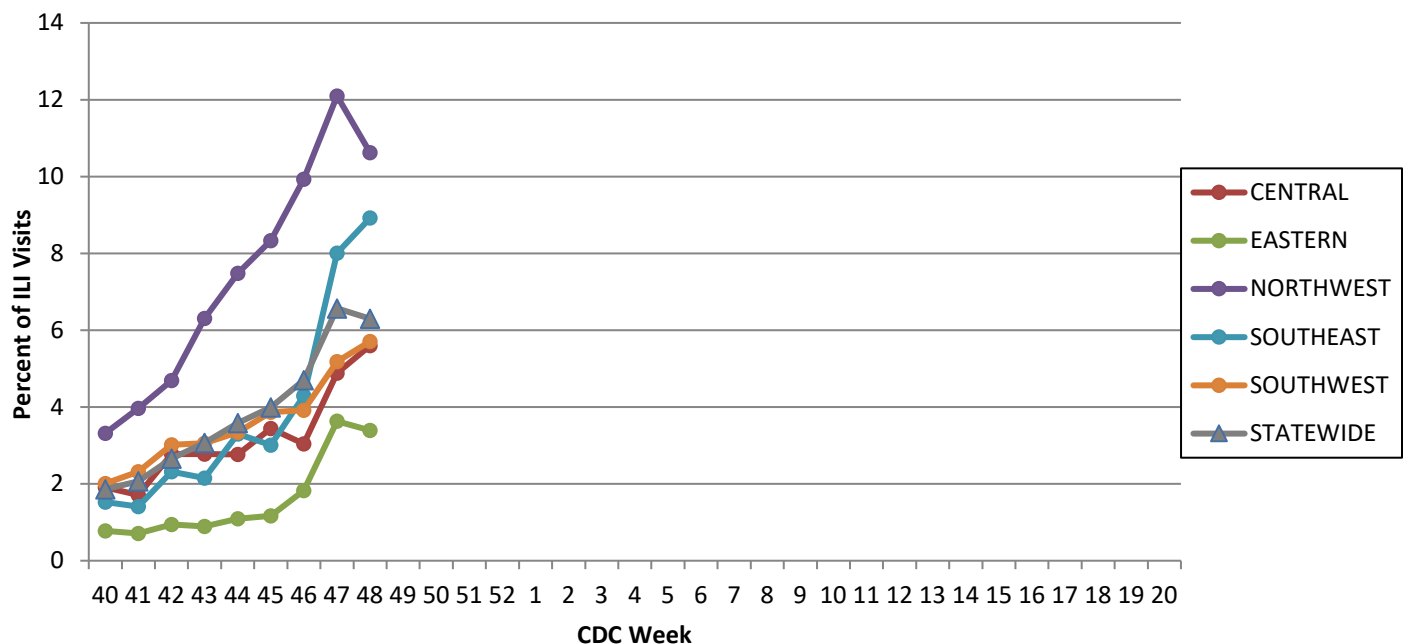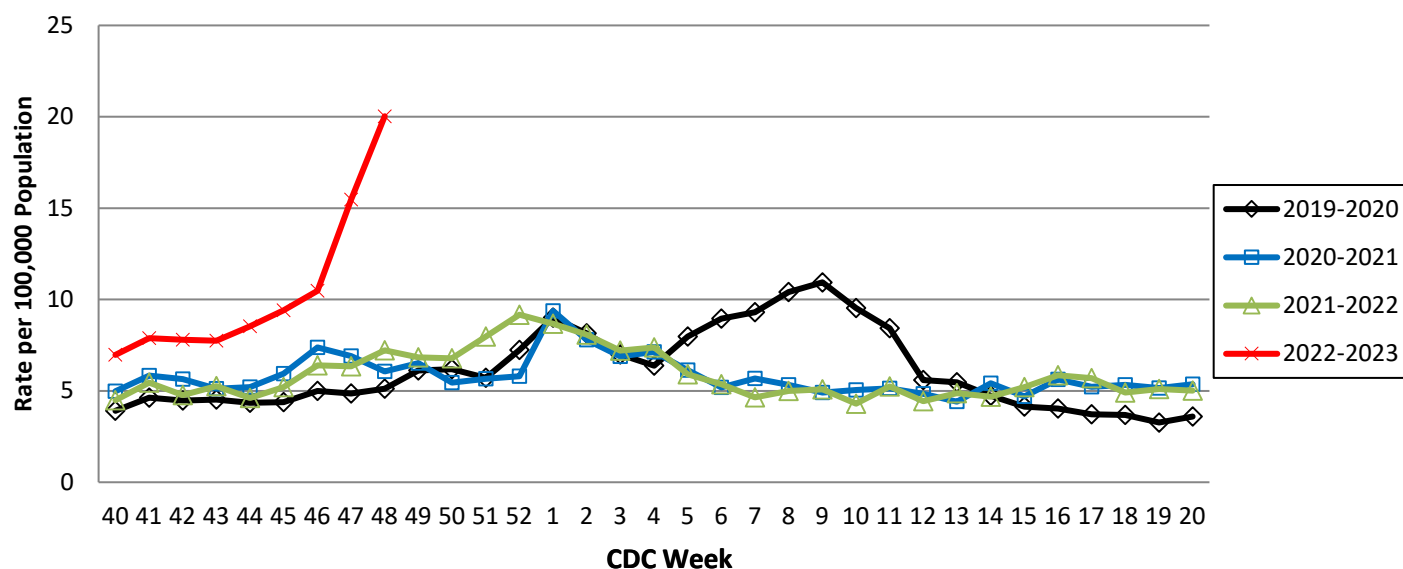2022-2023 season-to-date through the week ending December 3, 2022 (Week 48).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 48, 2022[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 9. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal.
Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 10. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 48, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 49: December 4, 2022 – December 10, 2022

All data are preliminary and may change as more reports are received.

Summary:

- Influenza activity remains high across Missouri. The estimated influenza activity for Week 49 is widespread[2], and the overall Influenza-like illness (ILI) activity remains at Level 11 in the very high category.[3]

- During Week 49, a total of 13,473 laboratory-positive[4] influenza cases (13,088 influenza A, 362 influenza B and 23 untyped) were reported. The influenza type for reported season-to-date cases includes 95.3% influenza A, 4.2% influenza B and 0.5% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) is 21.8% Week 49. The number of Missouri facilities reporting to NREVSS for Week 49 was limited at the time of this report.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE decreased slightly during Week 49. The reported percentage of visits for ILI through ESSENCE decreased to 6.24 % (Figure 6).[5]

- Seven influenza-associated deaths have been reported in Missouri as of Week 47 (week ending November 26, 2022).[6]

- Five influenza outbreaks and two influenza-associated school closures have been reported as of Week 49.

- Seasonal influenza activity continues to be high nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Widespread is defined as: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state with recent laboratory evidence of influenza in the state.

[3]ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 49**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 49**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 47-49 (November 20, 2022 – December 10, 2022)[*]

Influenza Type	Week 47	Week 48	Week 49	2022-2023[*] Season-to-Date
Influenza A	11,636	14,751	13,088	53,848
Influenza B	313	423	362	2,390
Influenza Unknown Or Untyped	33	54	23	257
Total	11,982	15,228	13,473	56,495

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 49 (December 4, 2022 – December 10, 2022)[*‡]
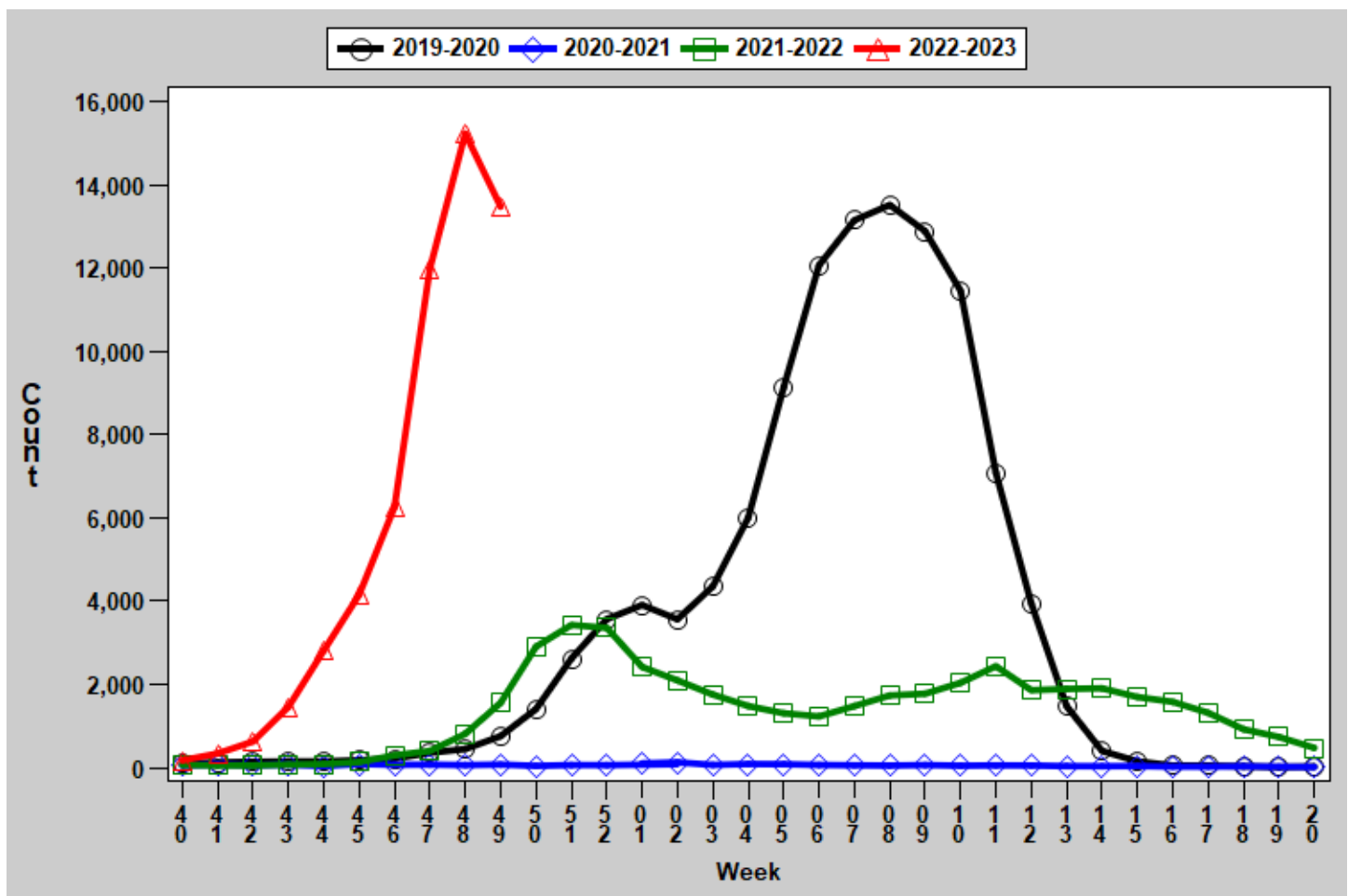
Age Group	Week 49 Cases	Week 49 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	2,067	561.56	8,301	2,255.22
05-24	5,632	360.10	25,926	1,657.66
25-49	2,937	151.15	11,667	600.44
50-64	1,394	116.15	5,509	459.00
65+	1,443	135.87	5,092	479.46
Total	13,473	219.52	56,495	920.50

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
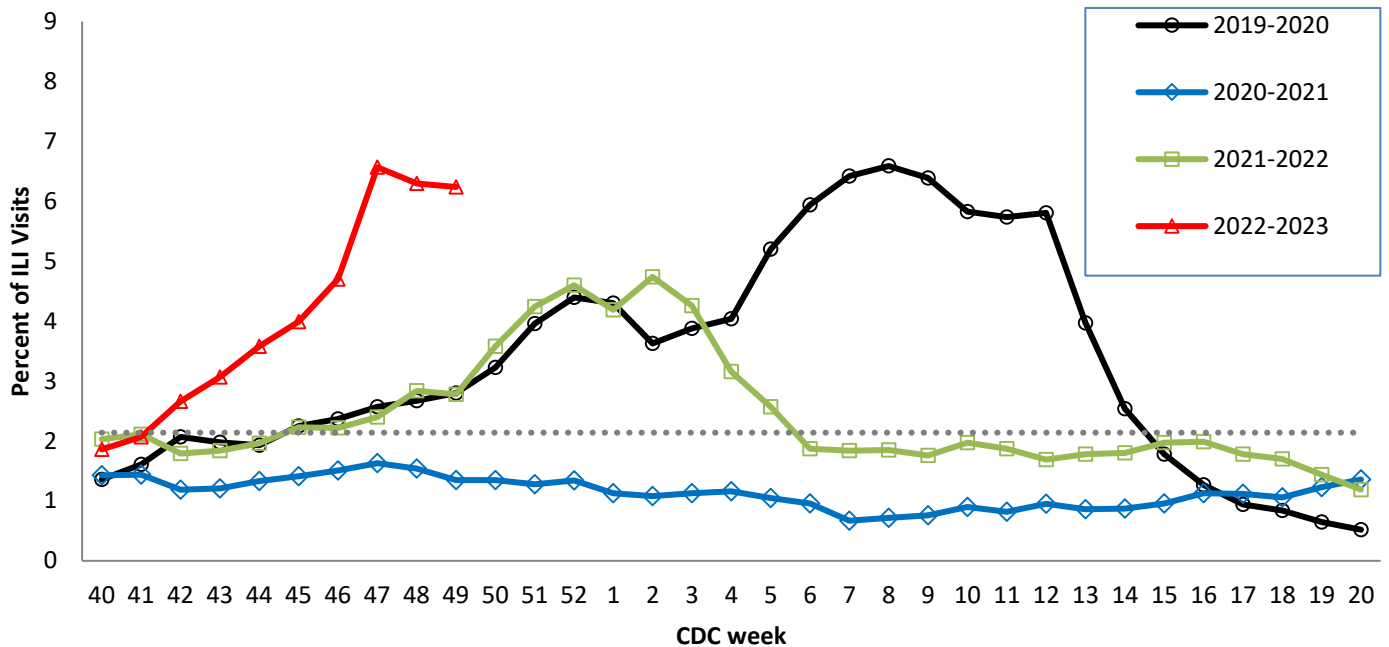[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 49 (December 4, 2022 – December 10, 2022)[*‡]

Region	Week 49 Cases	Week 49 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	1,107	164.04	3,849	570.38
Eastern	4,518	199.22	16,751	738.65
Northwest	3,044	185.98	19,587	1,196.71
Southeast	1,507	348.49	6,877	1,590.29
Southwest	3,297	313.81	9,431	897.65
Total	13,473	219.52	56,495	920.50

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending December 10, 2022 (Week 49).Data Source: Missouri Health Information Surveillance System (WebSurv)

Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri
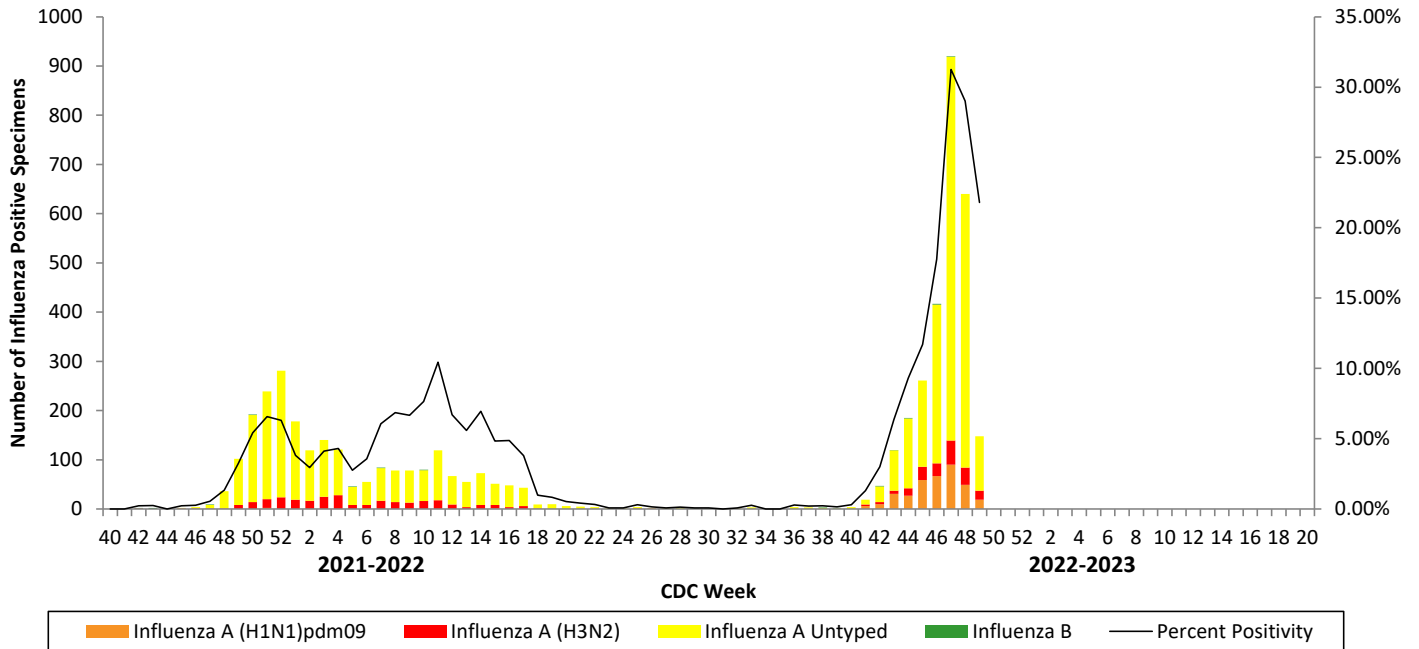
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
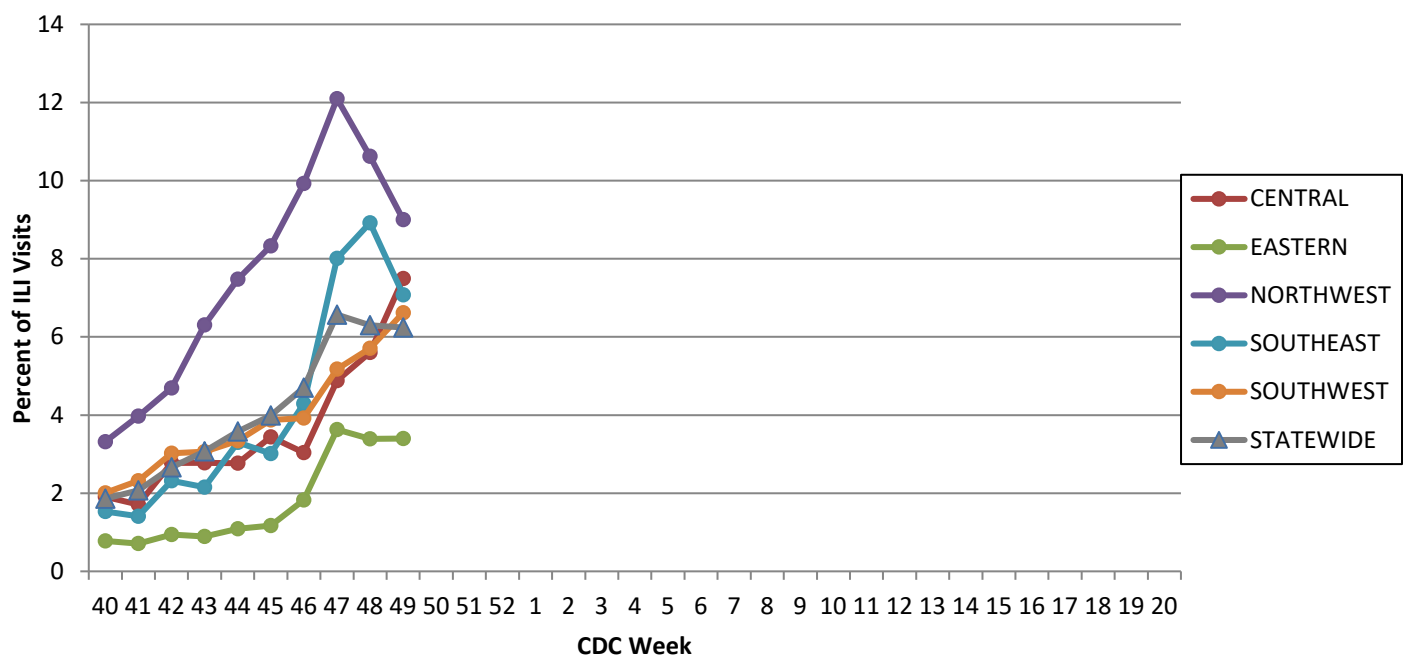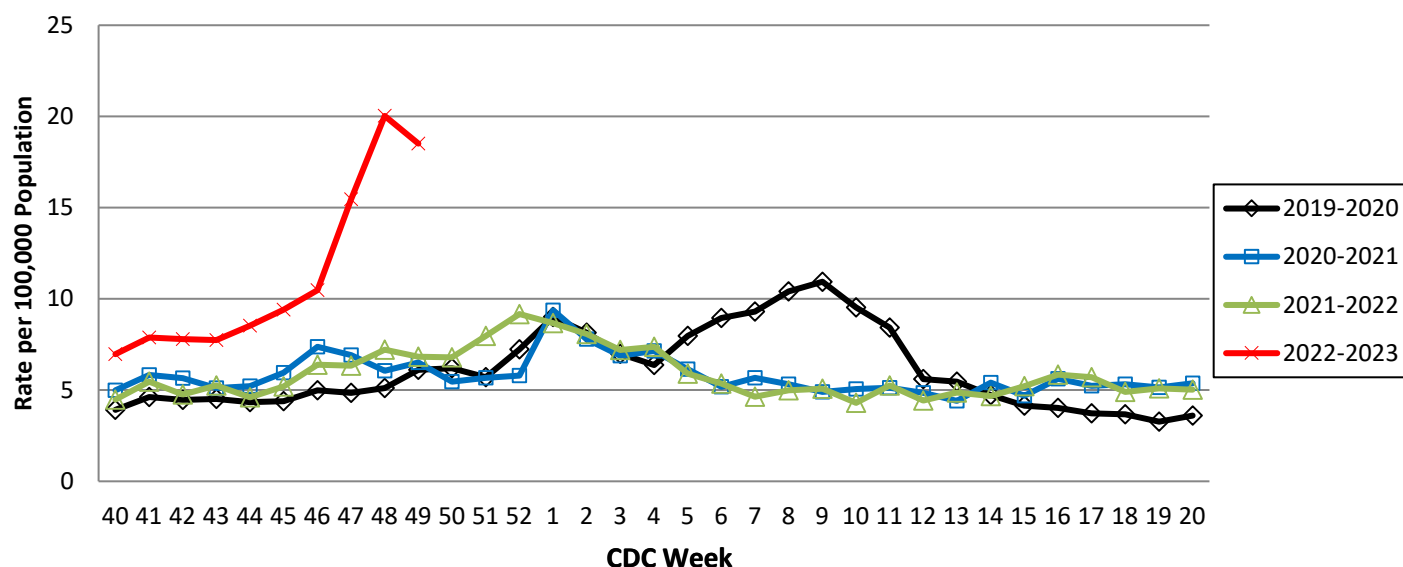2022-2023 season-to-date through the week ending December 10, 2022 (Week 49).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 49, 2022[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 9. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal. Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 10. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 49, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 50: December 11, 2022 – December 17, 2022

All data are preliminary and may change as more reports are received.

Summary:

- Influenza activity remains high across Missouri. The estimated influenza activity for Week 50 is widespread[2], and the overall Influenza-like illness (ILI) activity remains at Level 11 in the very high category.[3]

- During Week 50, a total of 13,359 laboratory-positive[4] influenza cases (12,994 influenza A, 332 influenza B and 33 untyped) were reported. The influenza type for reported season-to-date cases includes 95.7% influenza A, 3.9% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 21.8% for Week 50. The number of Missouri facilities reporting to NREVSS for Week 50 was limited at the time of this report.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE decreased to 5.43 % for Week 50 (Figure 6).[5]

- Eighteen influenza-associated deaths have been reported in Missouri as of Week 48 (week ending December 3, 2022).[6]

- Eight influenza outbreaks and two influenza-associated school closures have been reported as of Week 50.

- Seasonal influenza activity continues to be high nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1] The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2] Widespread is defined as: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state with recent laboratory evidence of influenza in the state.

[3] ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4] Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5] ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6] Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 50**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 50**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 48-50 (November 27, 2022 – December 17, 2022)[*]

Influenza Type	Week 48	Week 49	Week 50	2022-2023[*] Season-to-Date
Influenza A	15,409	16,228	12,994	70,994
Influenza B	448	469	332	2,874
Influenza Unknown Or Untyped	54	29	33	296
Total	15,911	16,726	13,359	74,164

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 50 (December 11, 2022 – December 17, 2022)[*‡]

Age Group	Week 50 Cases	Week 50 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	2,054	558.03	10,890	2,958.60
05-24	6,038	386.06	33,762	2,158.68
25-49	2,605	134.06	15,238	784.21
50-64	1,356	112.98	7,373	614.31
65+	1,306	122.97	6,901	649.79
Total	13,359	217.66	74,164	1,208.39

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
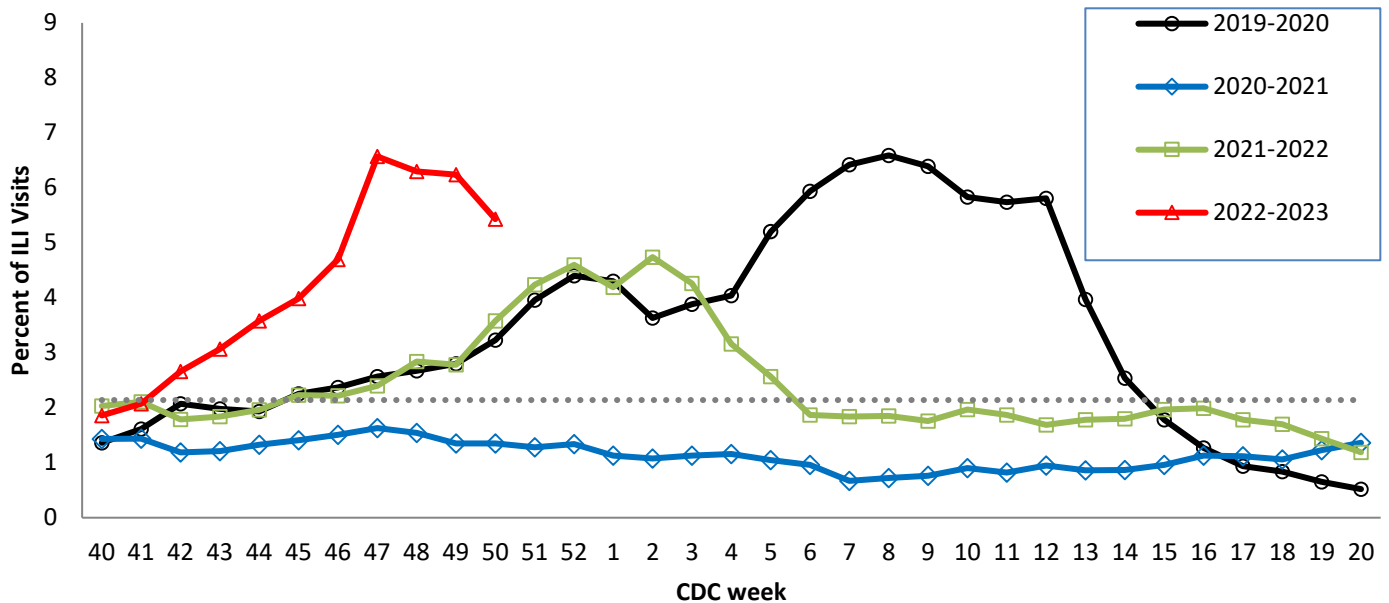[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 50 (December 11, 2022 – December 17, 2022)[*‡]

Region	Week 50 Cases	Week 50 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	1,561	231.32	6,145	910.61
Eastern	4,070	179.47	21,545	950.04
Northwest	2,748	167.89	24,108	1,472.93
Southeast	1,382	319.58	8,736	2,020.17
Southwest	3,598	342.46	13,630	1,297.32
Total	13,359	217.66	74,164	1,208.39

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending December 17, 2022 (Week 50).Data Source: Missouri Health Information Surveillance System (WebSurv)

Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri
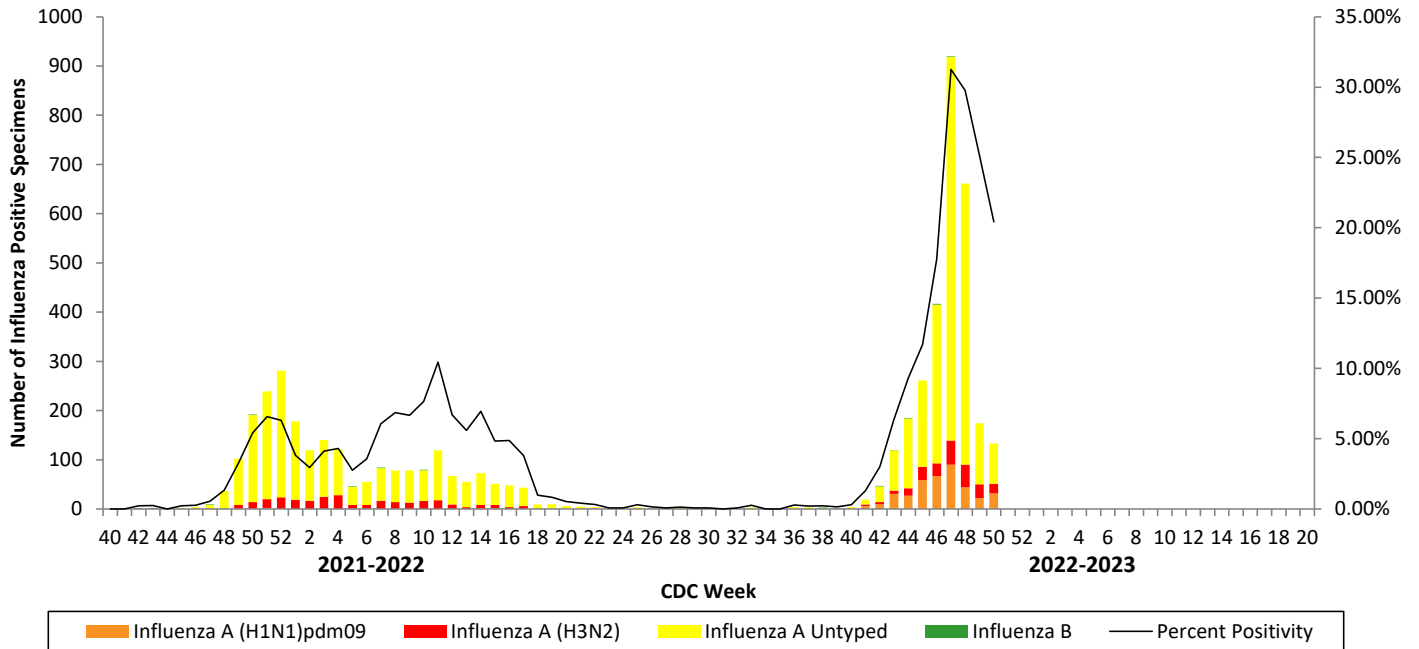
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
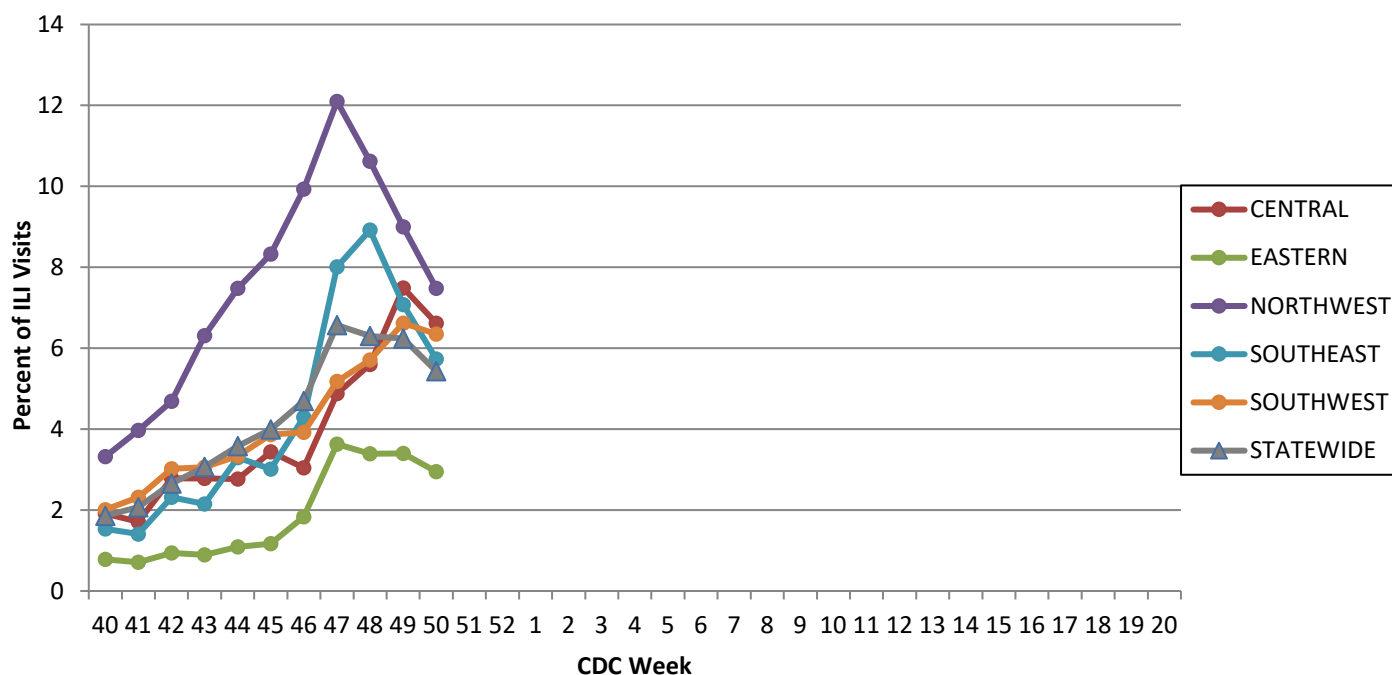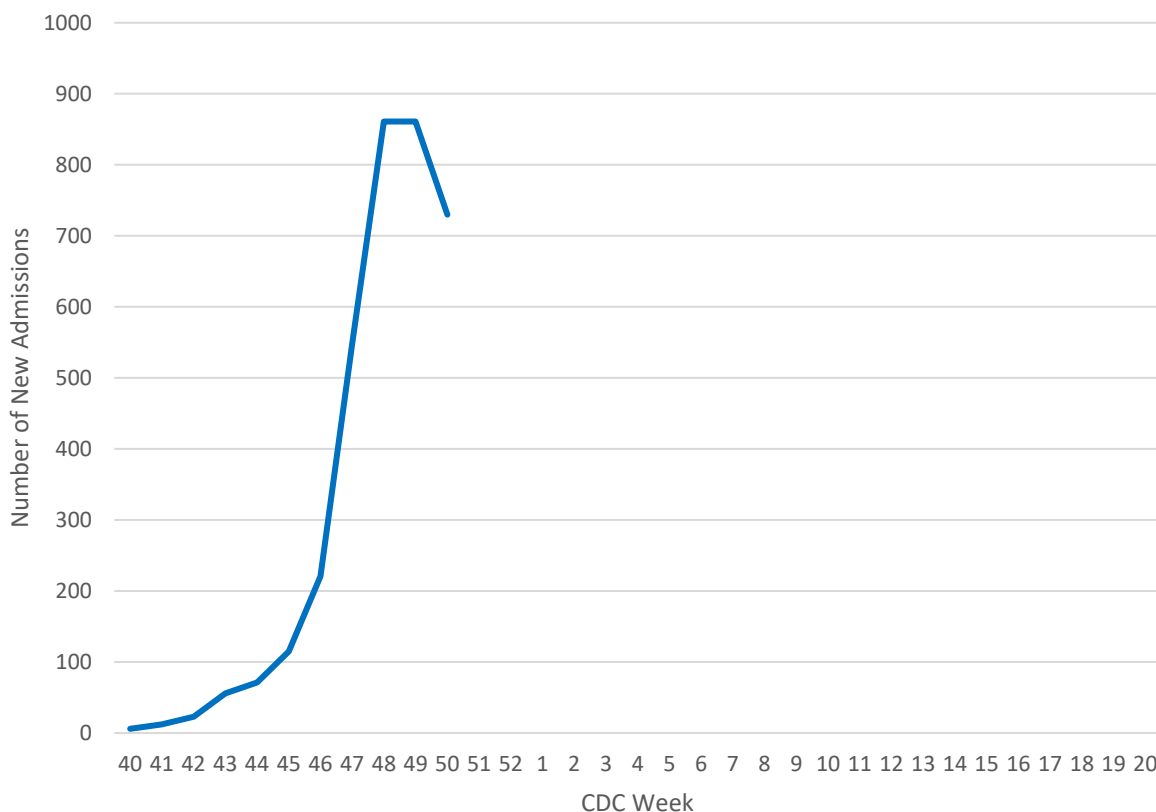2022-2023 season-to-date through the week ending December 17, 2022 (Week 50).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 50, 2022*

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
*The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season*

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
*The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season

Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov.
2022-2023 season-to-date through the week ending December 17, 2022 (Week 50).

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal.
Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).
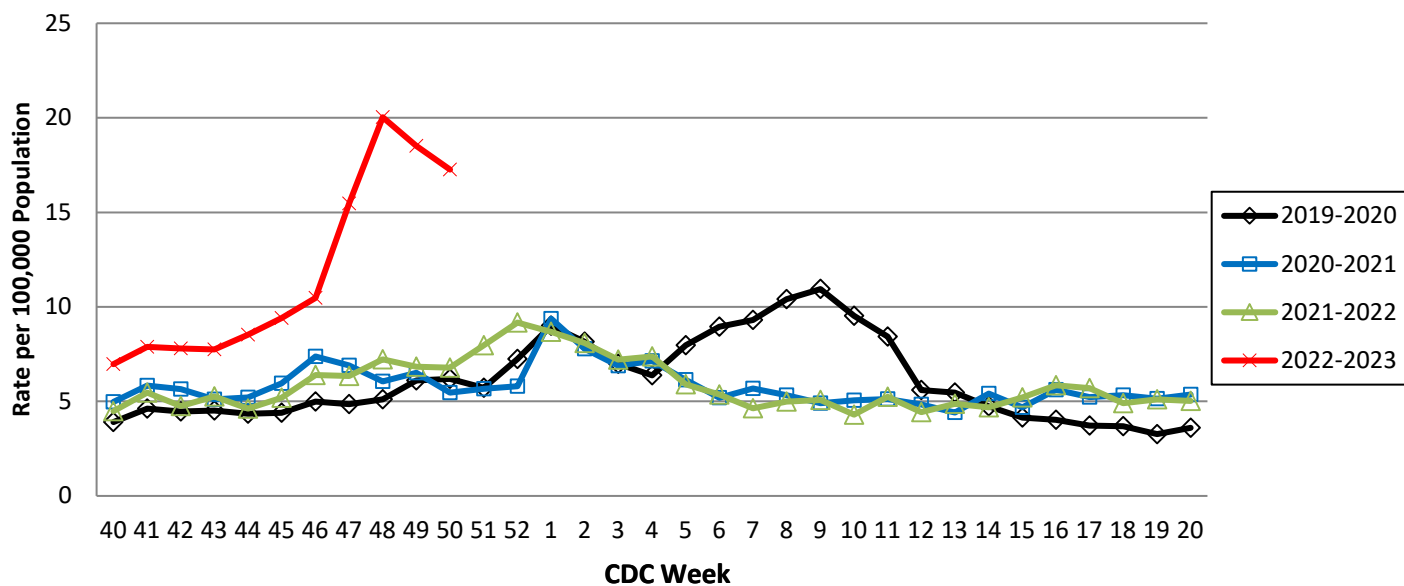
Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 50, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 51: December 18, 2022 – December 24, 2022

All data are preliminary and may change as more reports are received.

Summary:

- Influenza activity remains elevated across Missouri. The estimated influenza activity for Week 51 continues to be widespread[2], however, the overall Influenza-like illness (ILI) activity decreased to Level 10 in the high category.[3]

- During Week 51, a total of 7,166 laboratory-positive[4] influenza cases (6,967 influenza A, 177 influenza B and 22 untyped) were reported. The influenza type for reported season-to-date cases includes 95.8% influenza A, 3.8% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 23.7% for Week 51.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE decreased to 4.78 % for Week 51 (Figure 6).[5]

- Thirty-three influenza-associated deaths have been reported in Missouri as of Week 49 (week ending December 10, 2022).[6]

- Eight influenza outbreaks and two influenza-associated school closures have been reported as of Week 51.

- Seasonal influenza activity continues to be high nationwide but is declining. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Widespread is defined as: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state with recent laboratory evidence of influenza in the state.

[3] ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 51**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 51**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 49-51 (December 4, 2022 – December 24, 2022)[*]

Influenza Type	Week 49	Week 50	Week 51	2022-2023[*] Season-to-Date
Influenza A	16,341	13,778	6,967	78,904
Influenza B	481	378	177	3,113
Influenza Unknown Or Untyped	29	36	22	321
Total	16,851	14,192	7,166	82,338

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 51 (December 18, 2022 – December 24, 2022)[*‡]

Age Group	Week 51 Cases	Week 51 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	1,160	315.15	12,199	3,314.23
05-24	3,018	192.97	37,226	2,380.17
25-49	1,420	73.08	16,843	866.81
50-64	766	63.82	8,252	687.55
65+	802	75.52	7,818	736.13
Total	7,166	116.76	82,338	1,341.57

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 51 (December 11, 2022 – December 17, 2022)[*‡]
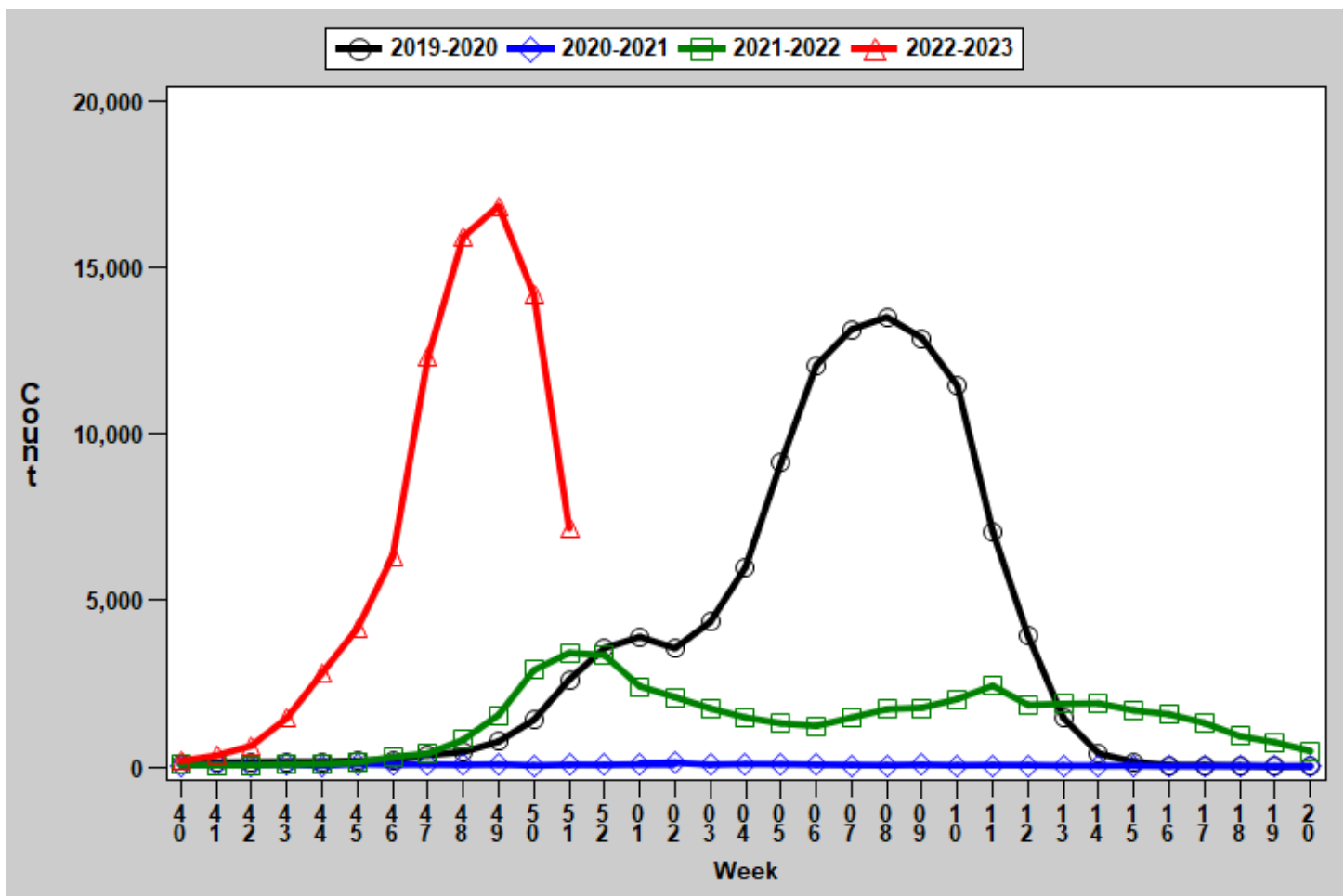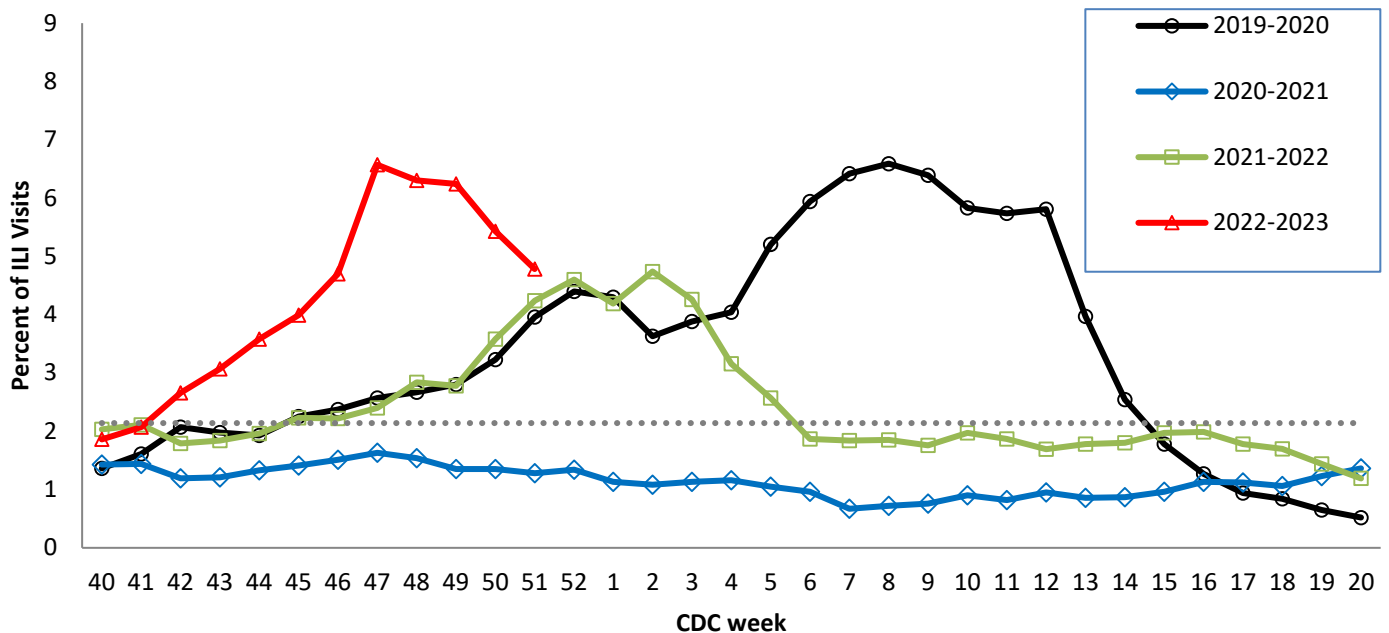
Region	Week 51 Cases	Week 51 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	633	93.80	7,341	1,087.85
Eastern	3,173	139.92	24,743	1,091.06
Northwest	1,202	73.44	25,454	1,555.17
Southeast	739	170.89	9,675	2,237.31
Southwest	1,419	135.06	15,125	1,439.61
Total	7,166	116.76	82,338	1,341.57

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending December 24, 2022 (Week 51).Data Source: Missouri Health Information Surveillance System (WebSurv)

Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri
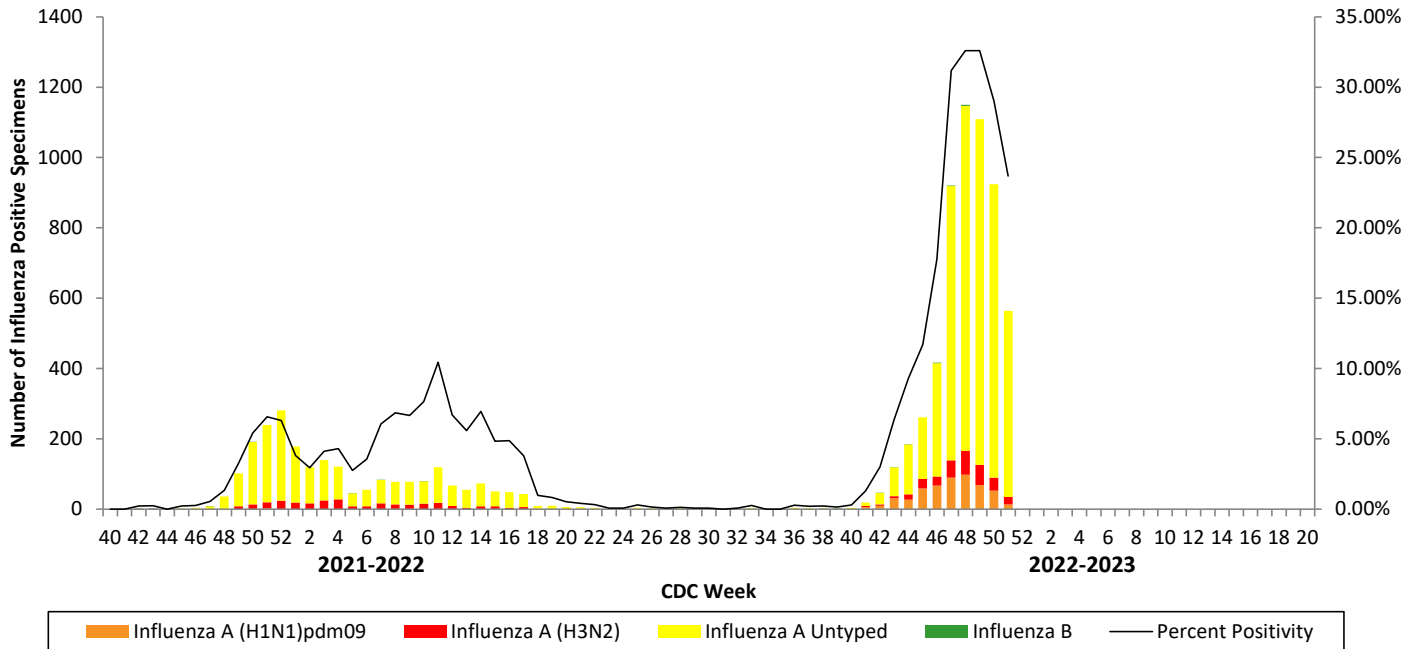
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
2022-2023 season-to-date through the week ending December 24, 2022 (Week 51).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]
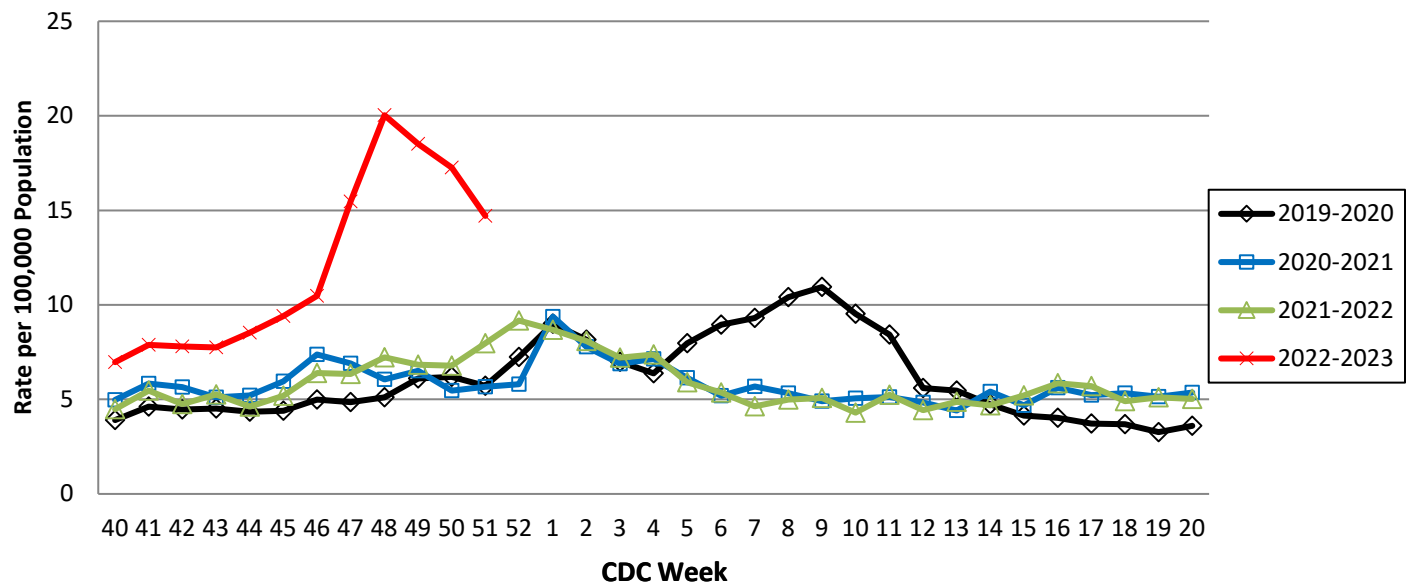

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 51, 2022[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season

Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov.
2022-2023 season-to-date through the week ending December 24, 2022 (Week 51).

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal.
Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 51, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 52: December 25, 2022 – December 31, 2022

All data are preliminary and may change as more reports are received.

Summary:

- Influenza activity remains elevated across Missouri. The estimated influenza activity for Week 52 continues to be widespread[2], however, the overall Influenza-like illness (ILI) activity decreased to Level 9 in the high category.[3]

- During Week 52, a total of 4,016 laboratory-positive[4] influenza cases (3,876 influenza A, 135 influenza B and 5 untyped) were reported. The influenza type for reported season-to-date cases includes 95.8% influenza A, 3.8% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 18.6% for Week 52.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE decreased to 3.28 % for Week 52 (Figure 6).[5]

- Fifty-four influenza-associated deaths have been reported in Missouri as of Week 50 (week ending December 17, 2022).[6]

- Eight influenza outbreaks and two influenza-associated school closures have been reported as of Week 52.

- Seasonal influenza activity continues to be high nationwide but is declining. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Widespread is defined as: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state with recent laboratory evidence of influenza in the state.

[3] ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 52**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 52**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 50-52 (December 11, 2022 – December 31, 2022)[*]

Influenza Type	Week 50	Week 51	Week 52	2022-2023[*] Season-to-Date
Influenza A	14,285	10,264	3,876	86,746
Influenza B	406	332	135	3,445
Influenza Unknown Or Untyped	37	24	5	330
Total	14,728	10,620	4,016	90,521

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 52 (December 25, 2022 – December 31, 2022)[*‡]
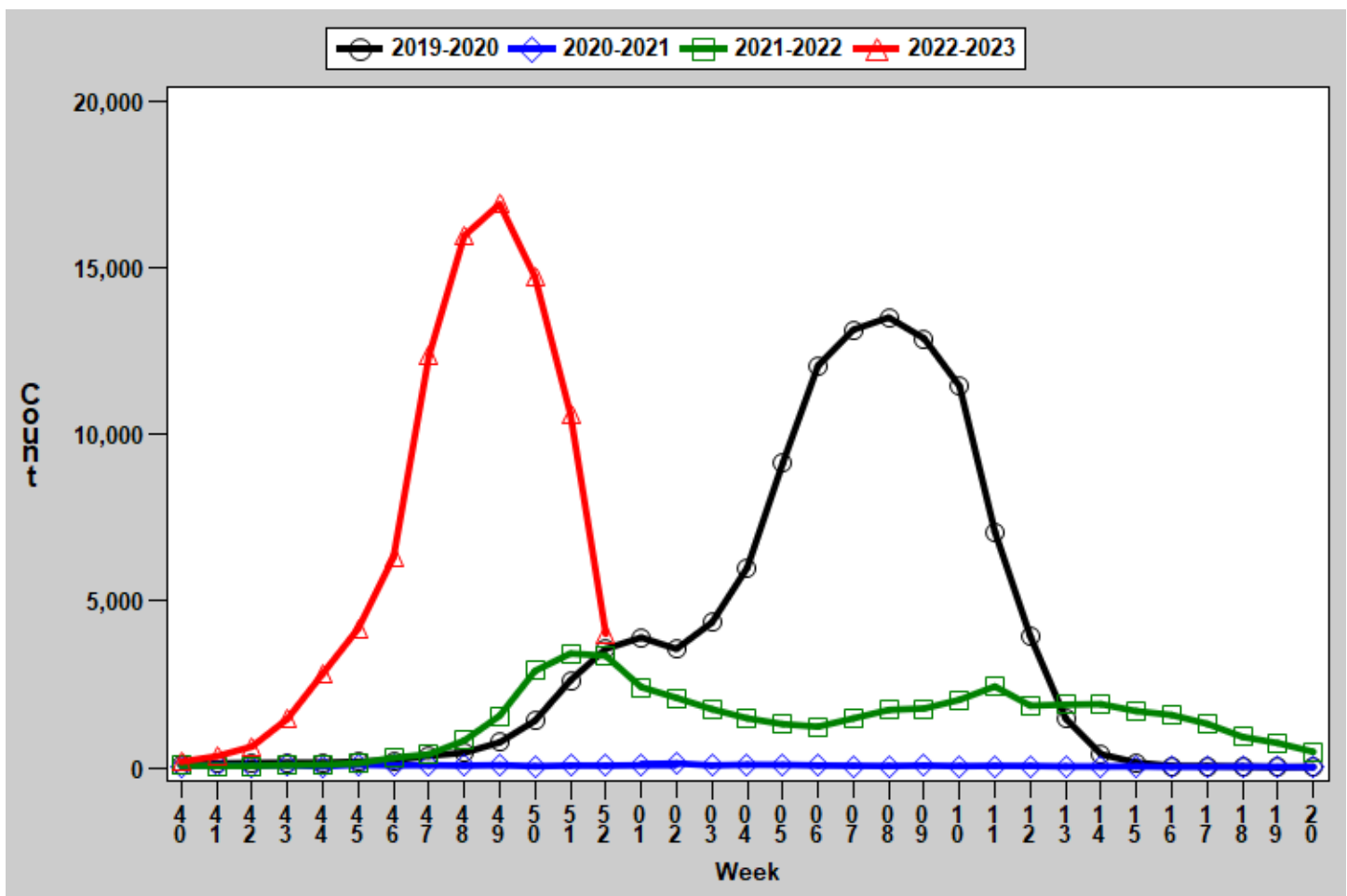
Age Group	Week 52 Cases	Week 52 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	581	157.85	13,358	3,629.10
05-24	1,269	81.14	40,148	2,566.99
25-49	1,001	51.52	18,844	969.80
50-64	582	48.49	9,316	776.20
65+	583	54.89	8,855	833.78
Total	4,016	65.43	90,521	1,474.90

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
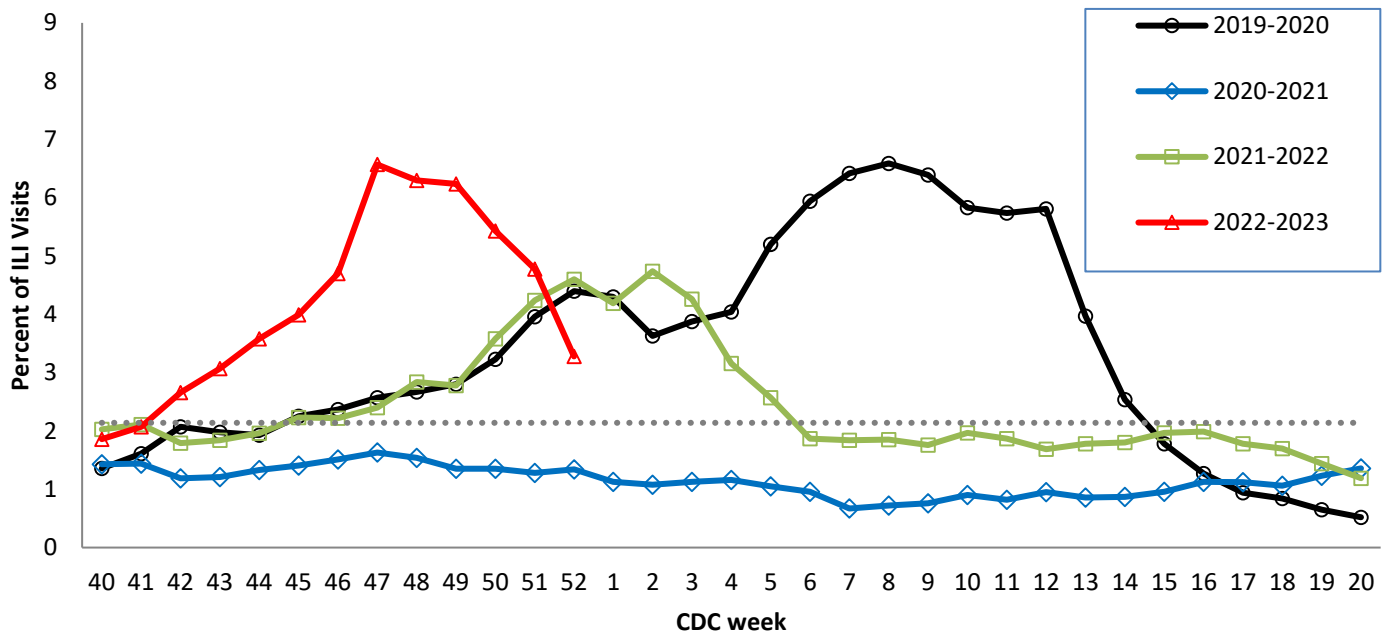[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 52 (December 25, 2022 – December 31, 2022)[*‡]

Region	Week 52 Cases	Week 52 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	454	67.28	8,750	1,296.64
Eastern	1,646	72.58	26,670	1,176.03
Northwest	730	44.60	27,253	1,665.08
Southeast	271	62.67	10,035	2,320.56
Southwest	915	87.09	17,813	1,695.46
Total	4,016	65.43	90,521	1,474.90

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)

[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[*]2022-2023 season-to-date through the week ending December 31, 2022 (Week 52).Data Source: Missouri Health Information Surveillance System (WebSurv)

Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri
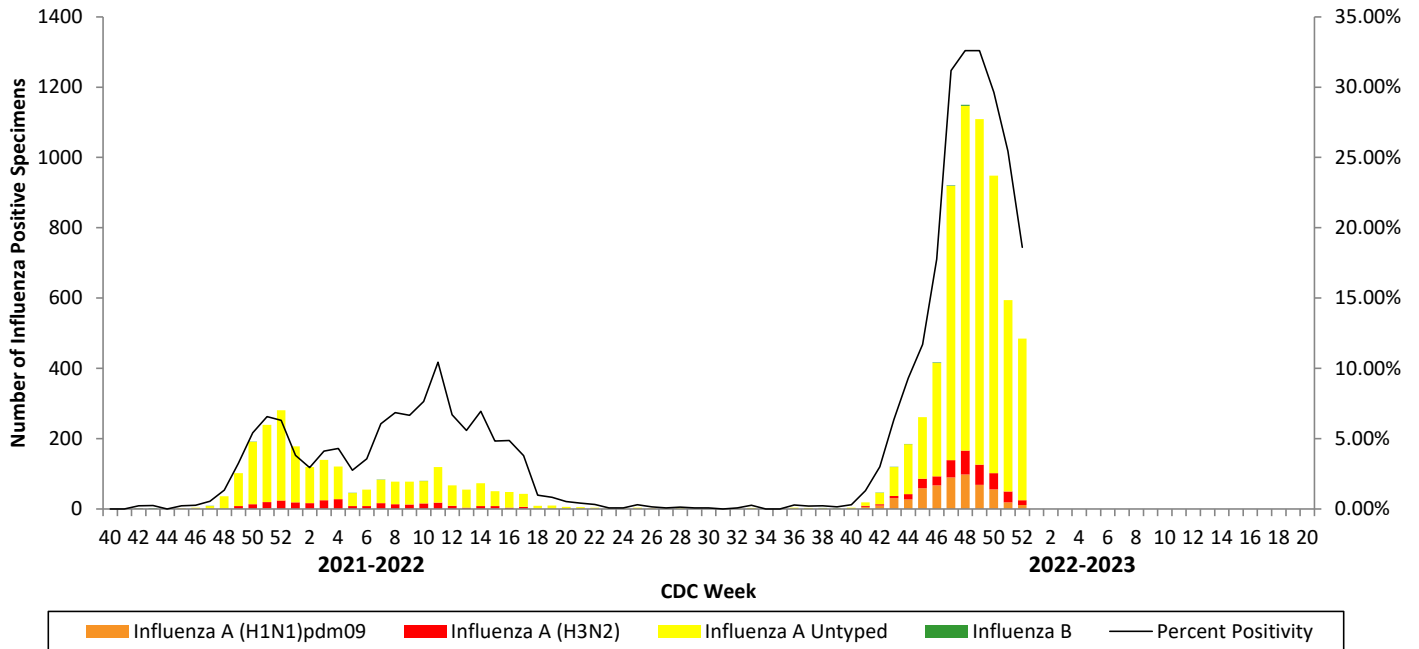
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
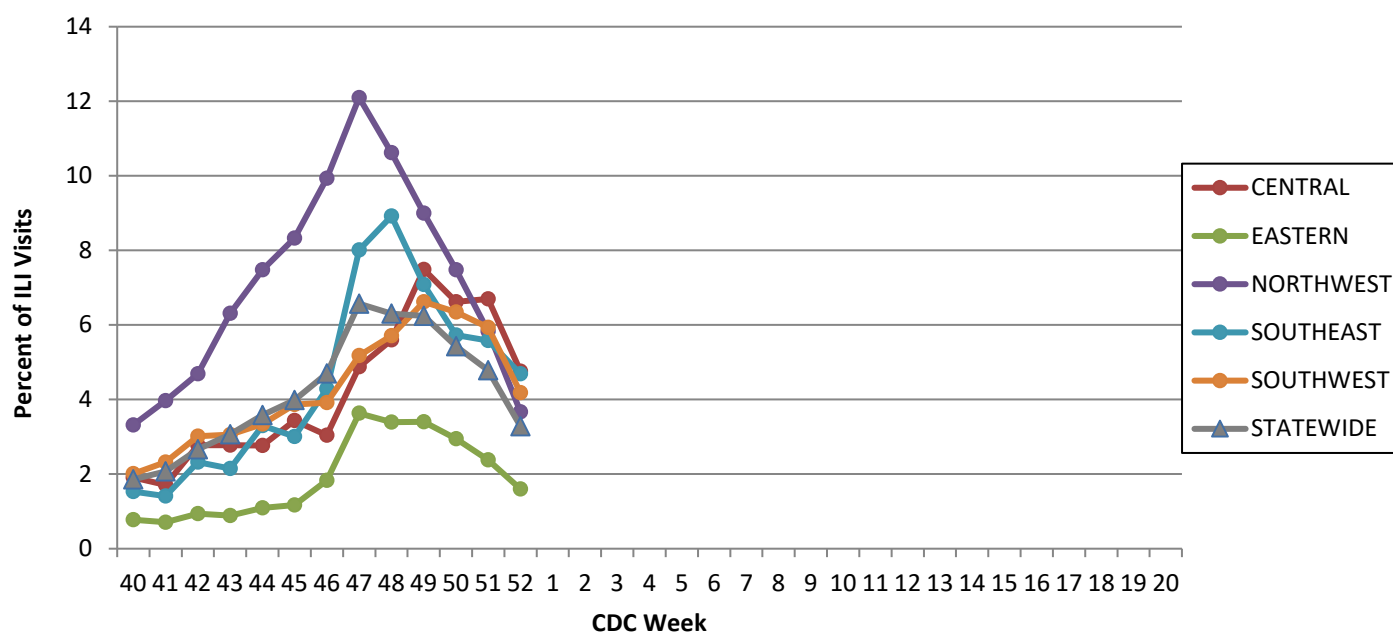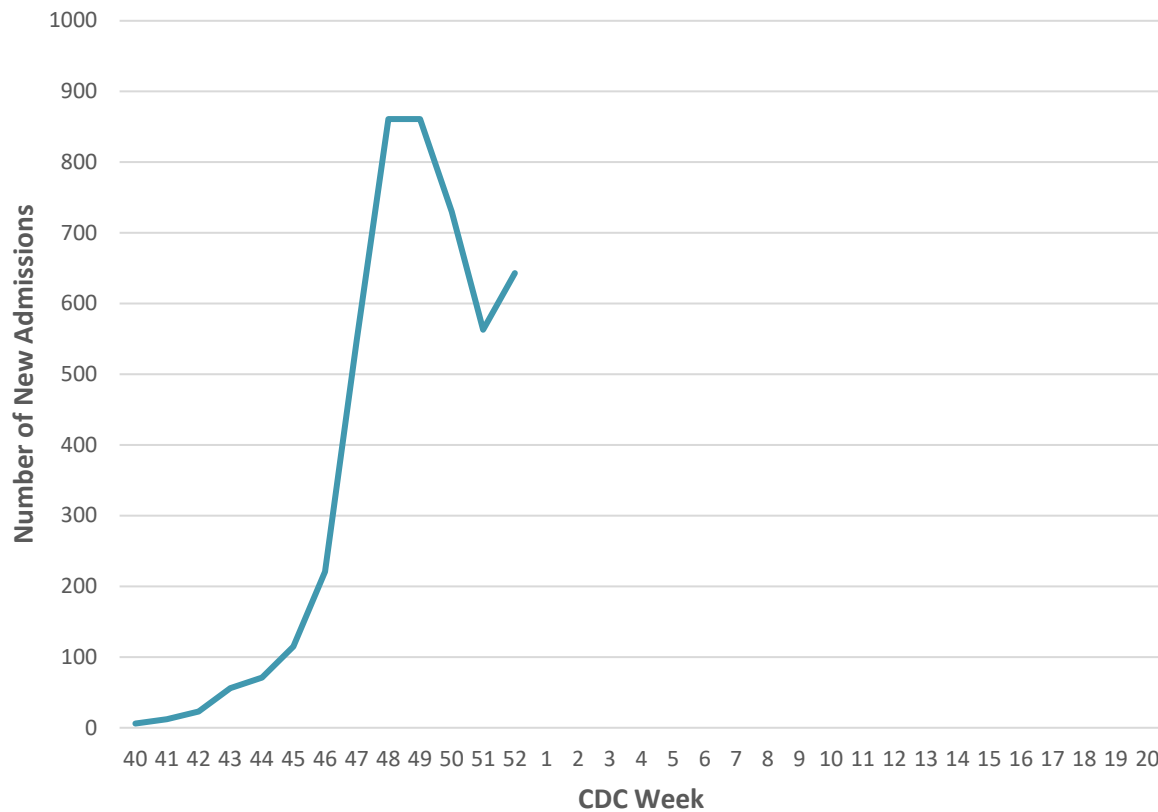2022-2023 season-to-date through the week ending December 31, 2022 (Week 52).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 52, 2022[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season

Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov.
2022-2023 season-to-date through the week ending December 24, 2022 (Week 52).

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal.
Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).
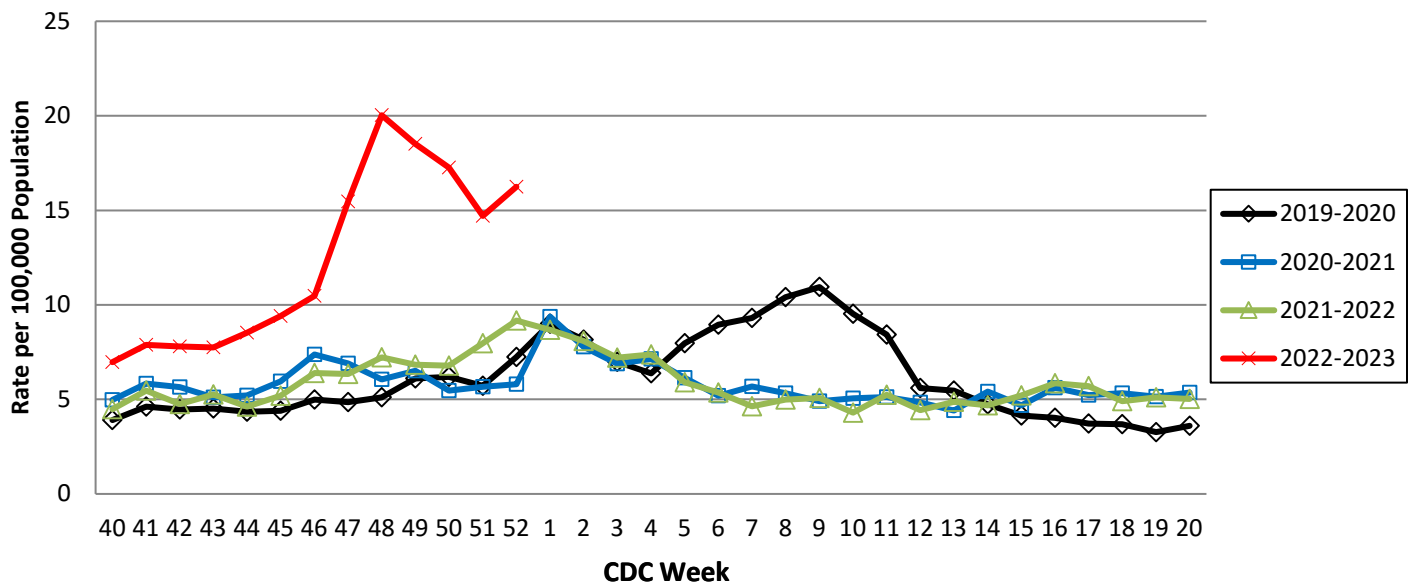
Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 52, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 1: January 1, 2023 – January 7, 2023

All data are preliminary and may change as more reports are received.

Summary:

- Influenza activity remains elevated across Missouri. The estimated influenza activity for Week 1 continues to be widespread[2], however, overall Influenza-like illness (ILI) activity decreased to Level 6 in the moderate category.[3]

- During Week 1, a total of 3,541 laboratory-positive[4] influenza cases (3,336 influenza A, 194 influenza B and 11 untyped) were reported. The influenza type for reported season-to-date cases includes 95.7% influenza A, 3.9% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 11.5% for Week 1.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE decreased to 2.51 % for Week 1 (Figure 6).[5]

- Eighty-five influenza-associated deaths have been reported in Missouri as of Week 51 (week ending December 24, 2022).[6]

- Eight influenza outbreaks and two influenza-associated school closures have been reported as of Week 1.

- Seasonal influenza activity remains high but continues to decline nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Widespread is defined as: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state with recent laboratory evidence of influenza in the state.

[3]ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 1**

- **Reported Week-specific Rate per 100,000 Population, CDC Week 1**

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**

- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

**Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type,
Missouri, CDC Weeks 51-01 (December 18, 2022 – January 7, 2023)[*]**

Influenza Type	Week 51	Week 52	Week 1	2022-2023[*] Season-to-Date
Influenza A	10,991	6,465	3,336	94,050
Influenza B	373	268	194	3,828
Influenza Unknown Or Untyped	25	12	11	348
Total	11,389	6,745	3,541	98,226

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

**Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group,
Missouri, CDC Week 1 (January 1, 2023 – January 7, 2023)[*‡]**

Age Group	Week 1 Cases	Week 1 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	509	138.29	14,592	3,964.36
05-24	886	56.65	42,236	2,700.50
25-49	919	47.30	20,753	1,068.04
50-64	586	48.82	10,511	875.76
65+	640	60.26	10,133	954.11
Total	3,541	57.70	98,226	1,600.44

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 1 (January 1, 2023 – January 7, 2023)[*‡]
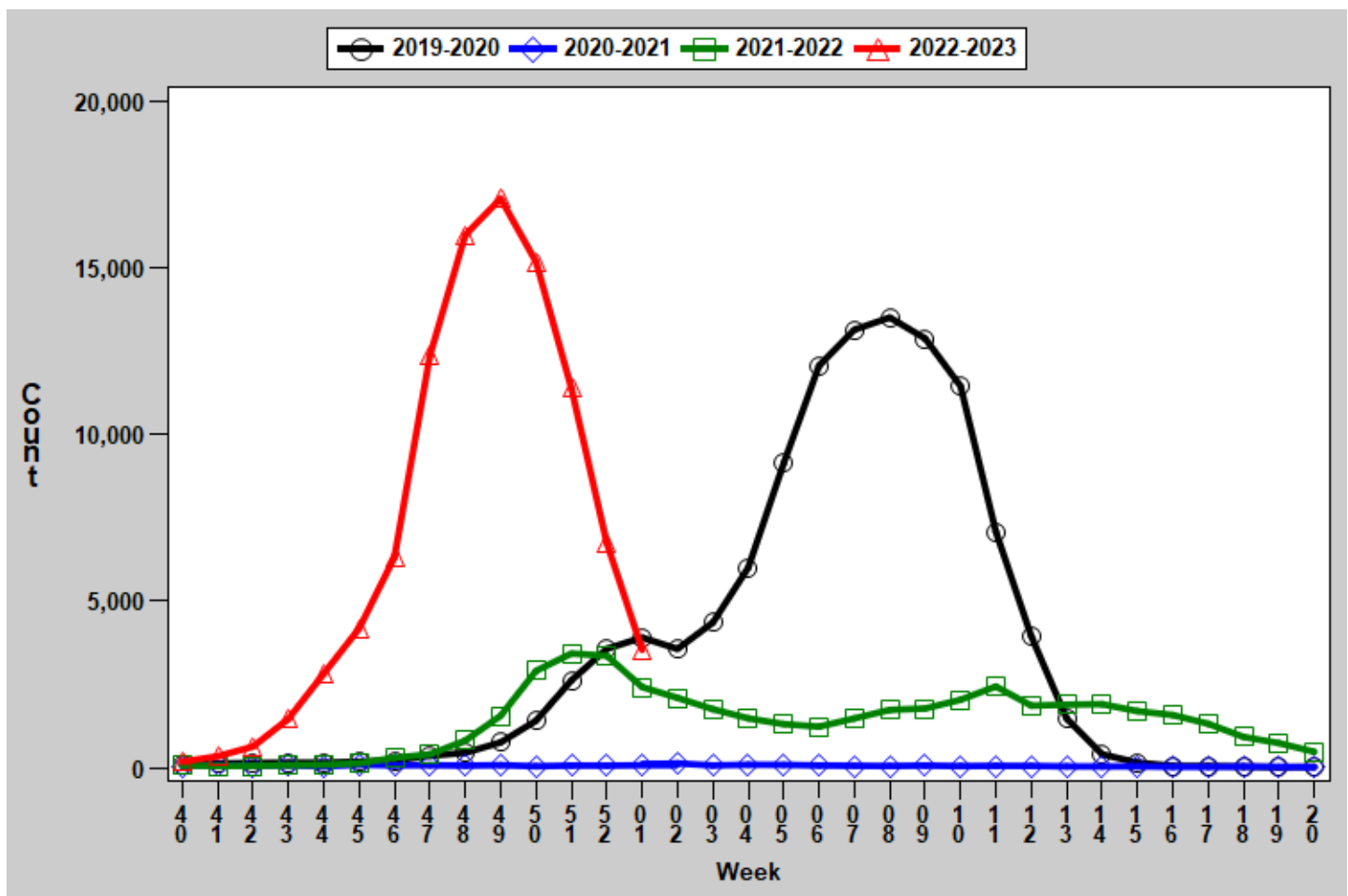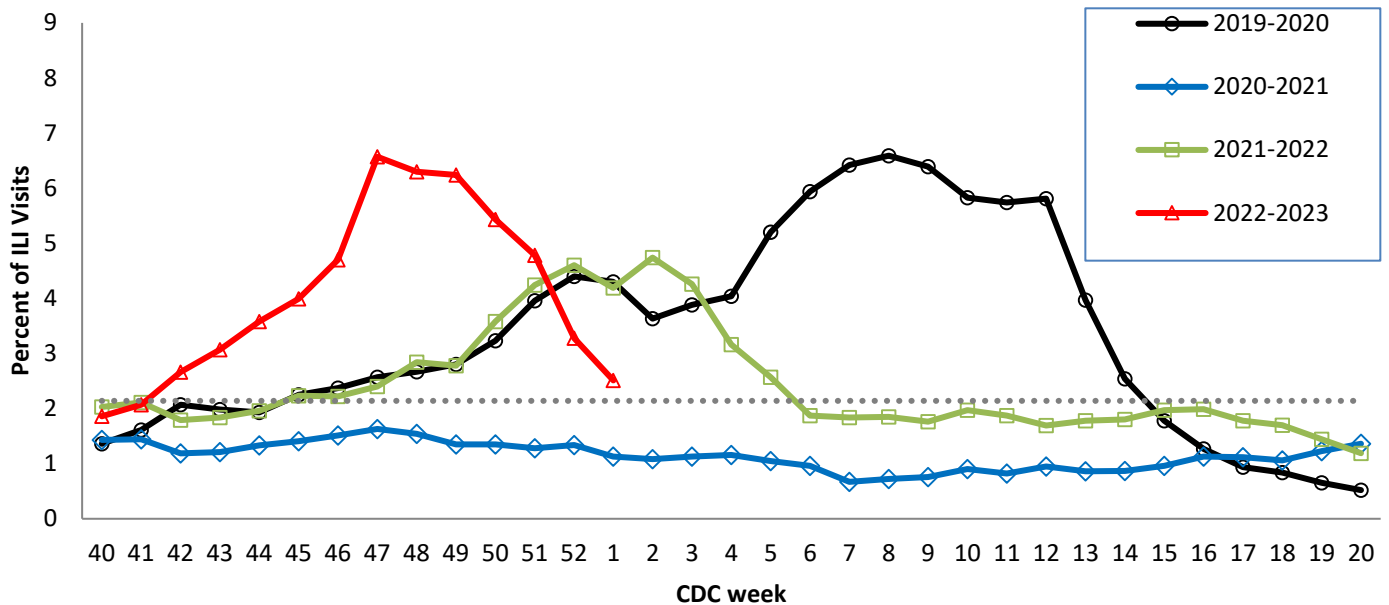
Region	Week 1 Cases	Week 1 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	318	47.12	9,693	1,436.39
Eastern	987	43.52	27,770	1,224.54
Northwest	556	33.97	28,965	1,769.68
Southeast	430	99.44	11,395	2,635.06
Southwest	1,250	118.98	20,403	1,941.98
Total	3,541	57.70	98,226	1,600.44

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending January 7, 2023 (Week 1).Data Source: Missouri Health Information Surveillance System (WebSurv)

Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri
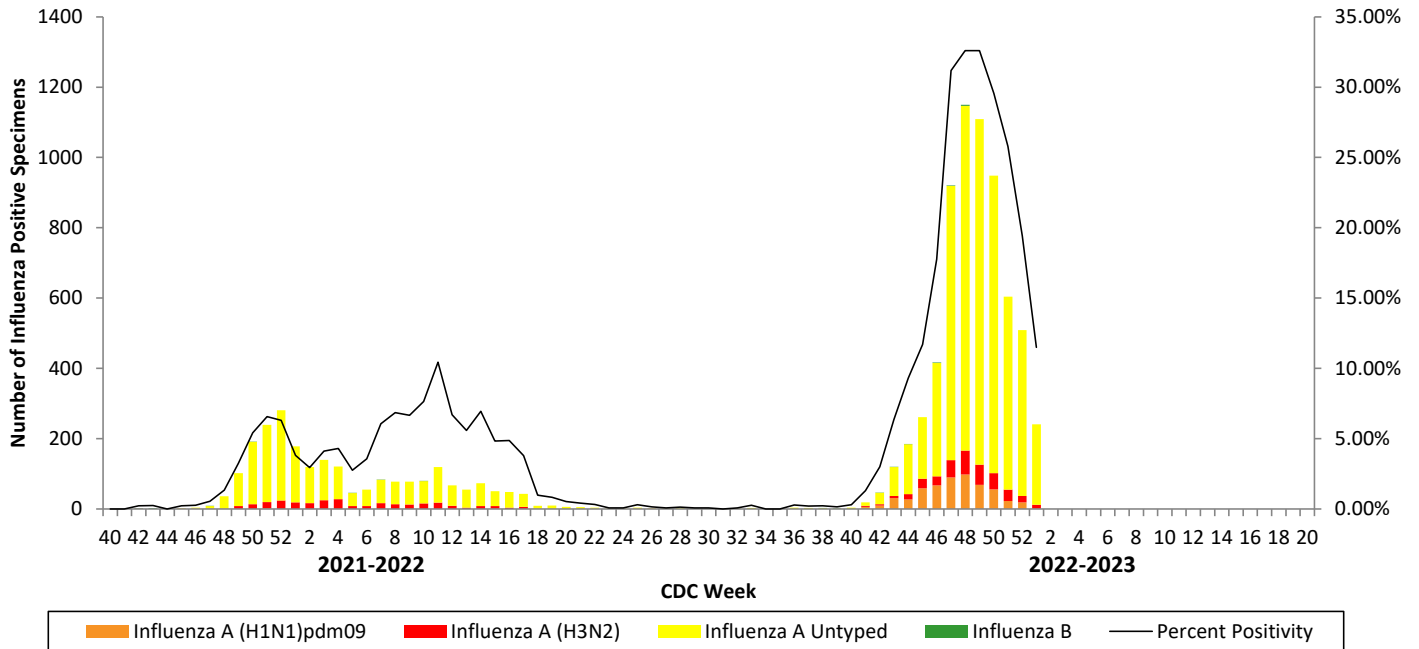
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
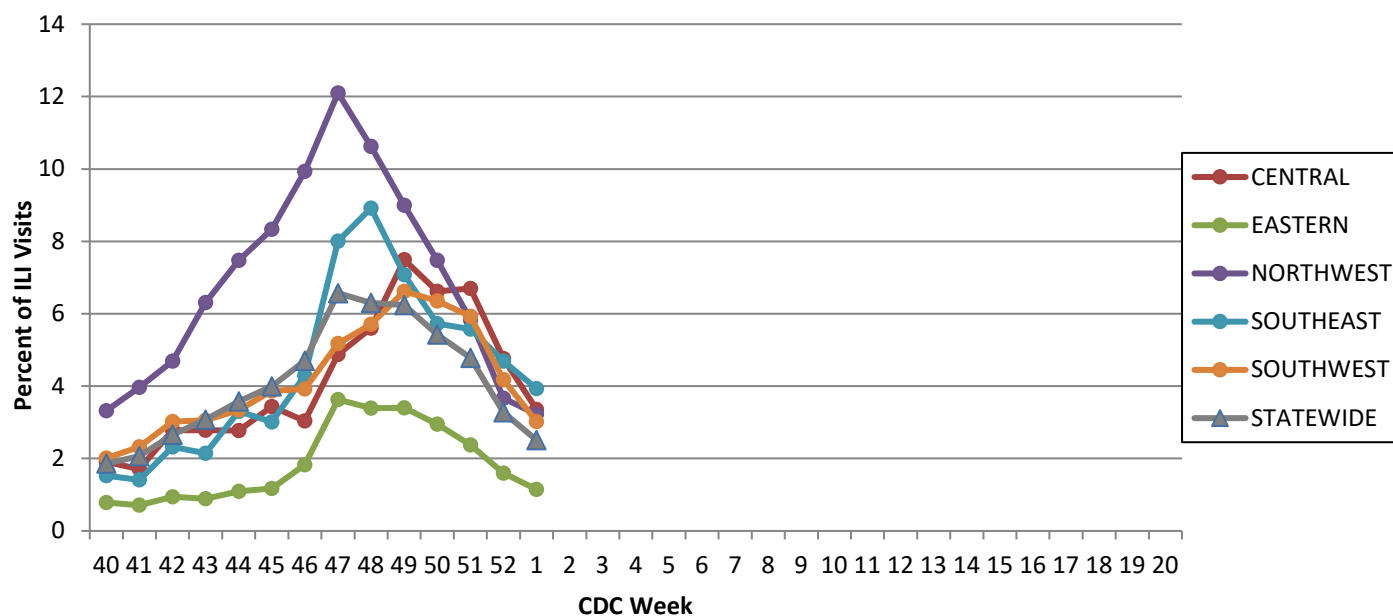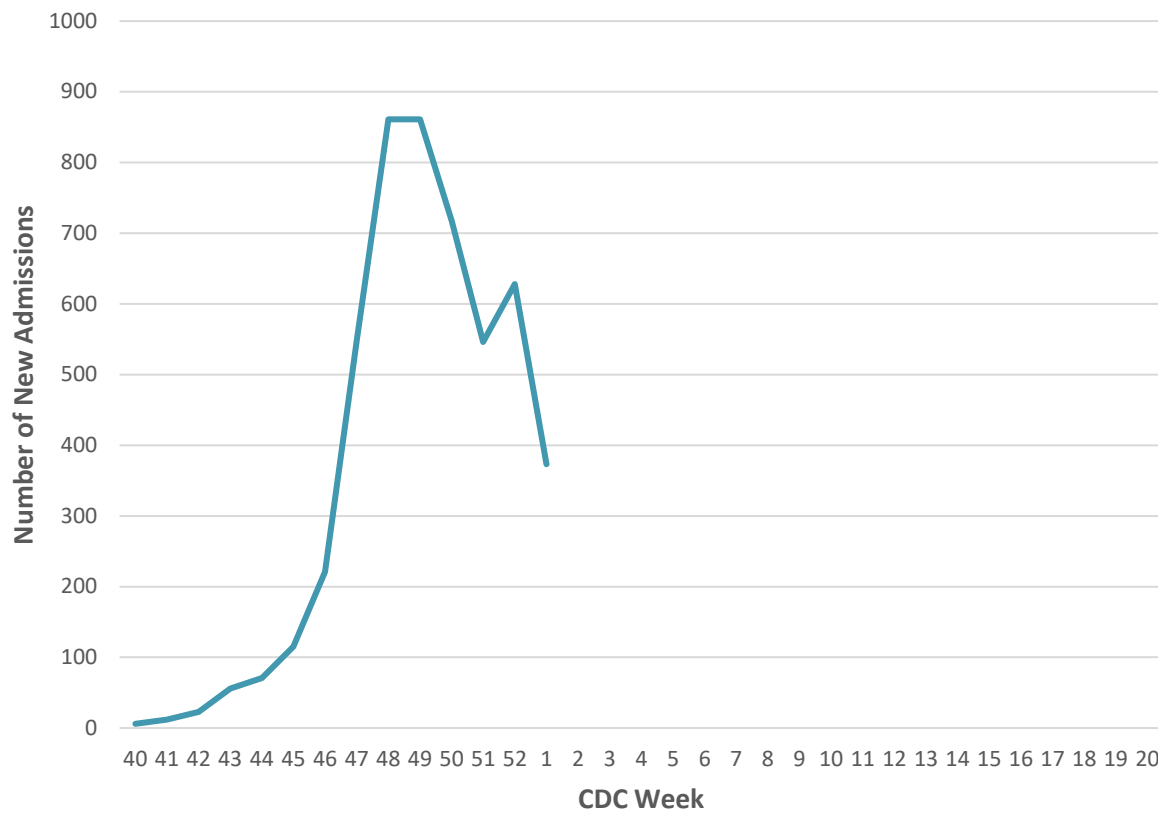2022-2023 season-to-date through the week ending January 7, 2023 (Week 1).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI
visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS),
Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 1, 2022[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season

Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov.
2022-2023 season-to-date through the week ending January 7, 2022 (Week 1).

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal.
Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).
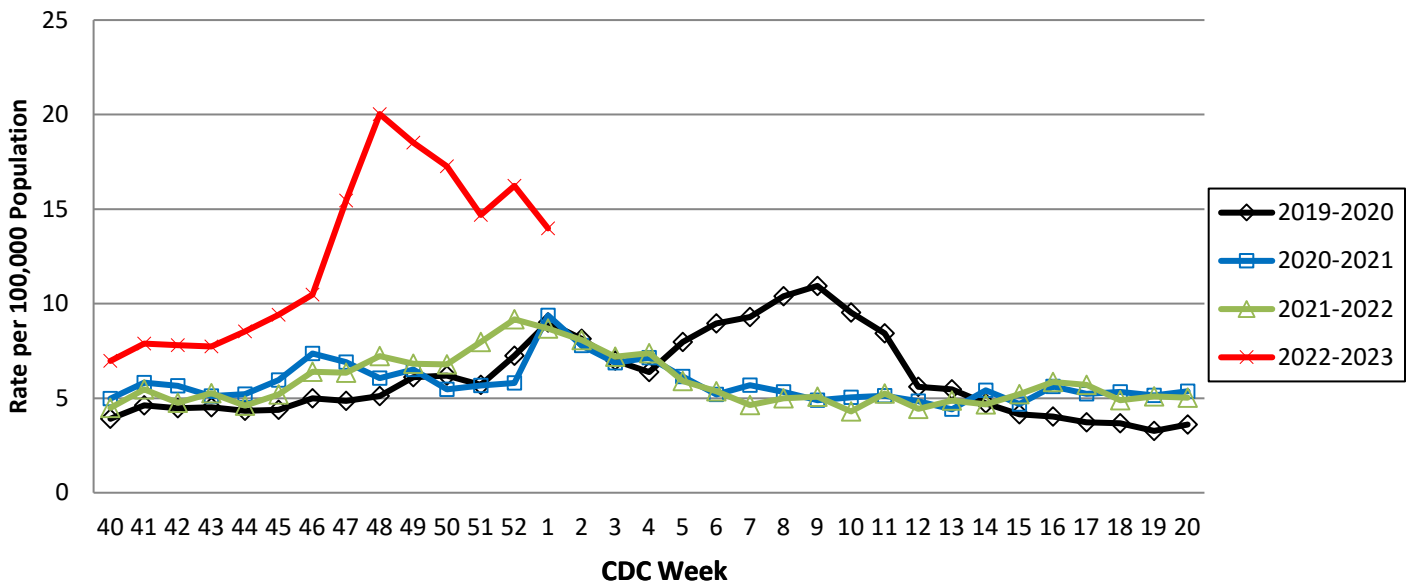
Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 1, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 2: January 8, 2023 – January 14, 2023

All data are preliminary and may change as more reports are received.

Summary:

- Influenza activity continues to be widespread[2] across Missouri but is declining. Overall, Influenza-like illness (ILI) activity decreased to Level 4 in the low category.[3]

- During Week 2, a total of 1,444 laboratory-positive[4] influenza cases (1,312 influenza A, 118 influenza B and 14 untyped) were reported. The influenza type for reported season-to-date cases includes 95.6r% influenza A, 4.0% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 4.8% for Week 2.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE decreased to 2.14 % for Week 2 (Figure 6).[5]

- One hundred fifteen influenza-associated deaths have been reported in Missouri as of Week 52 (week ending December 31, 2022).[6]

- Nine influenza outbreaks and two influenza-associated school closures have been reported as of Week 2.

- Seasonal influenza activity continues to decline nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Widespread is defined as: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state with recent laboratory evidence of influenza in the state.

[3]ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 2**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 2**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 52-02 (December 25, 2022 – January 14, 2023)[*]

Influenza Type	Week 52	Week 1	Week 2	2022-2023[*] Season-to-Date
Influenza A	6,733	3,806	1,312	96,463
Influenza B	279	231	118	4,005
Influenza Unknown Or Untyped	14	14	14	368
Total	7,026	4,051	1,444	100,863

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 2 (January 8, 2023 – January 14, 2023)[*‡]
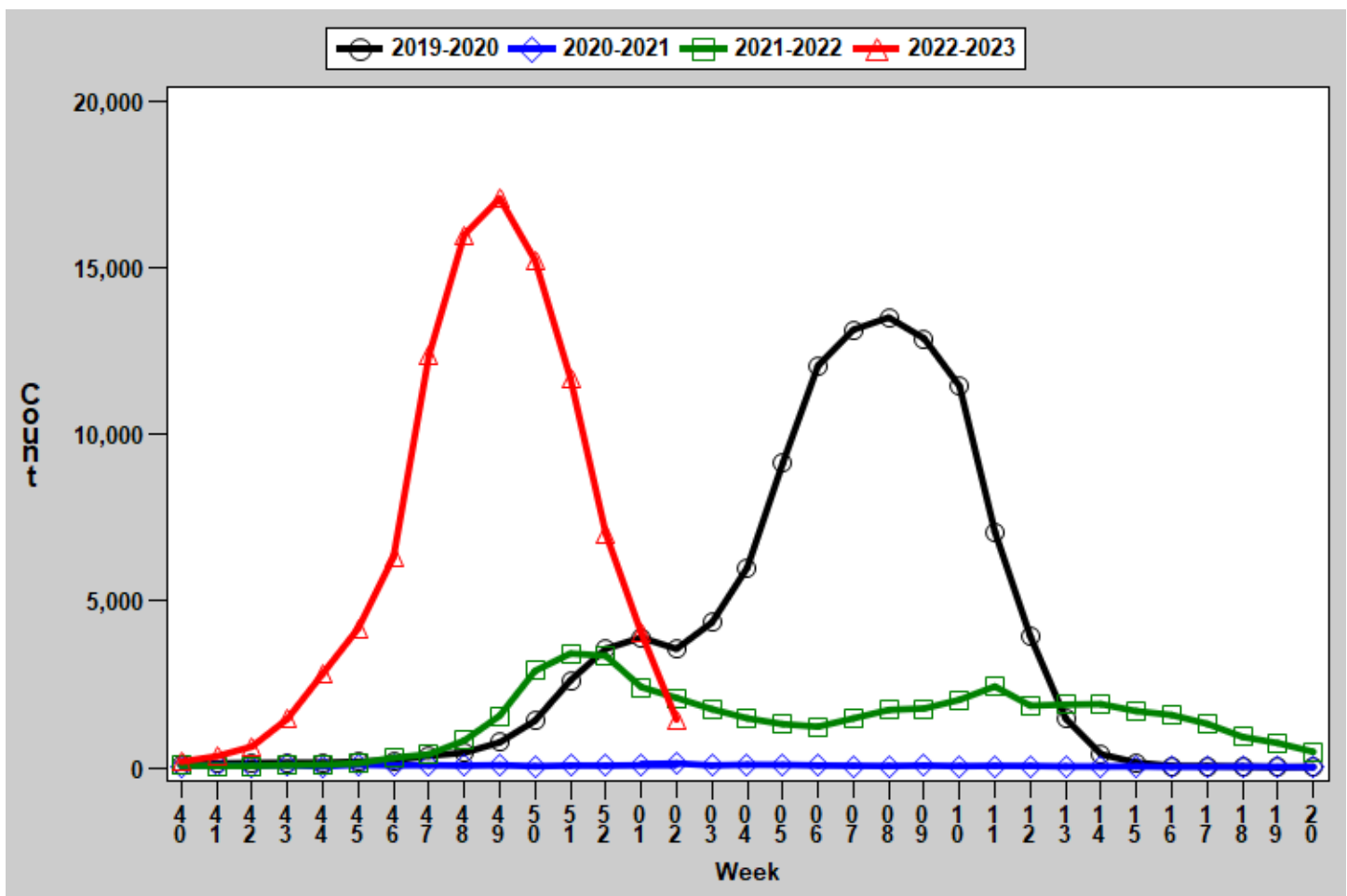
Age Group	Week 2 Cases	Week 2 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	199	54.06	14,959	4,064.06
05-24	367	23.47	42,973	2,747.62
25-49	352	18.12	21,352	1,098.87
50-64	249	20.75	10,945	911.92
65+	277	26.08	10,606	998.65
Total	1,444	25.53	100,836	1,642.97

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
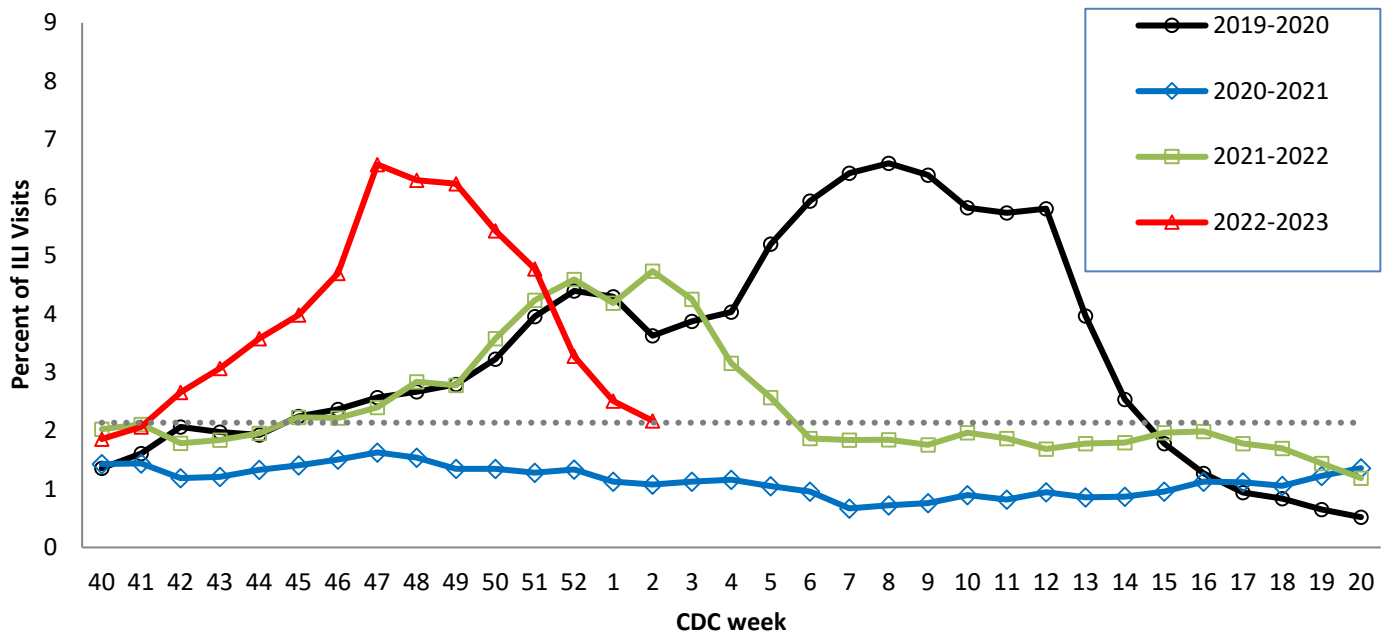[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive† Influenza Cases and Case Rates by Region, Missouri, CDC Week 2 (January 8, 2023 – January 14, 2023)*‡

Region	Week 2 Cases	Week 2 Rate‡	2022-23* Season-to-Date	2022-23* Season-to-Date Rate‡
Central	199	29.49	10,207	1,512.55
Eastern	458	20.20	28,247	1,245.57
Northwest	292	17.84	29,535	1,804.50
Southeast	153	35.38	11,628	2,688.94
Southwest	342	32.55	21,219	2,019.64
Total	1,444	23.53	100,836	1,642.97

†Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
*Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
‡Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive† Influenza Cases by CDC Week, Missouri, 2019-2023*

†Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
*2022-2023 season-to-date through the week ending January 14, 2023 (Week 2).Data Source: Missouri Health Information Surveillance System (WebSurv)

Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri
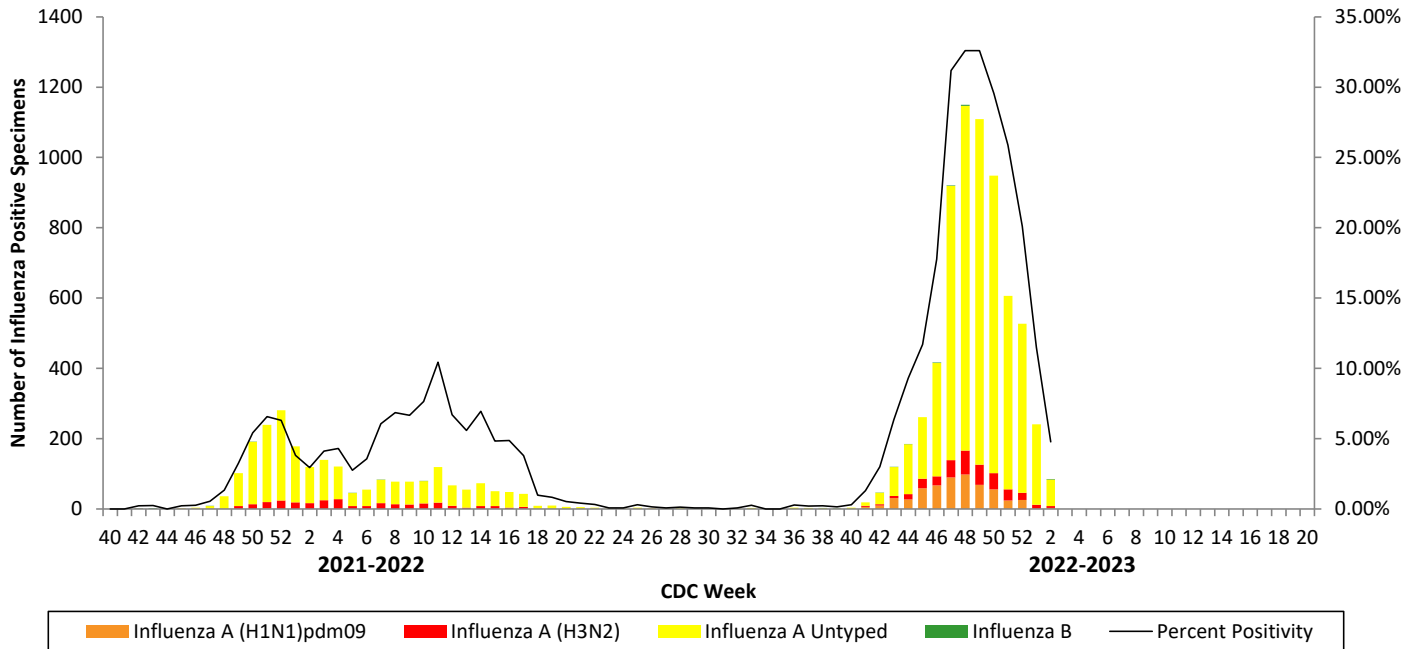
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
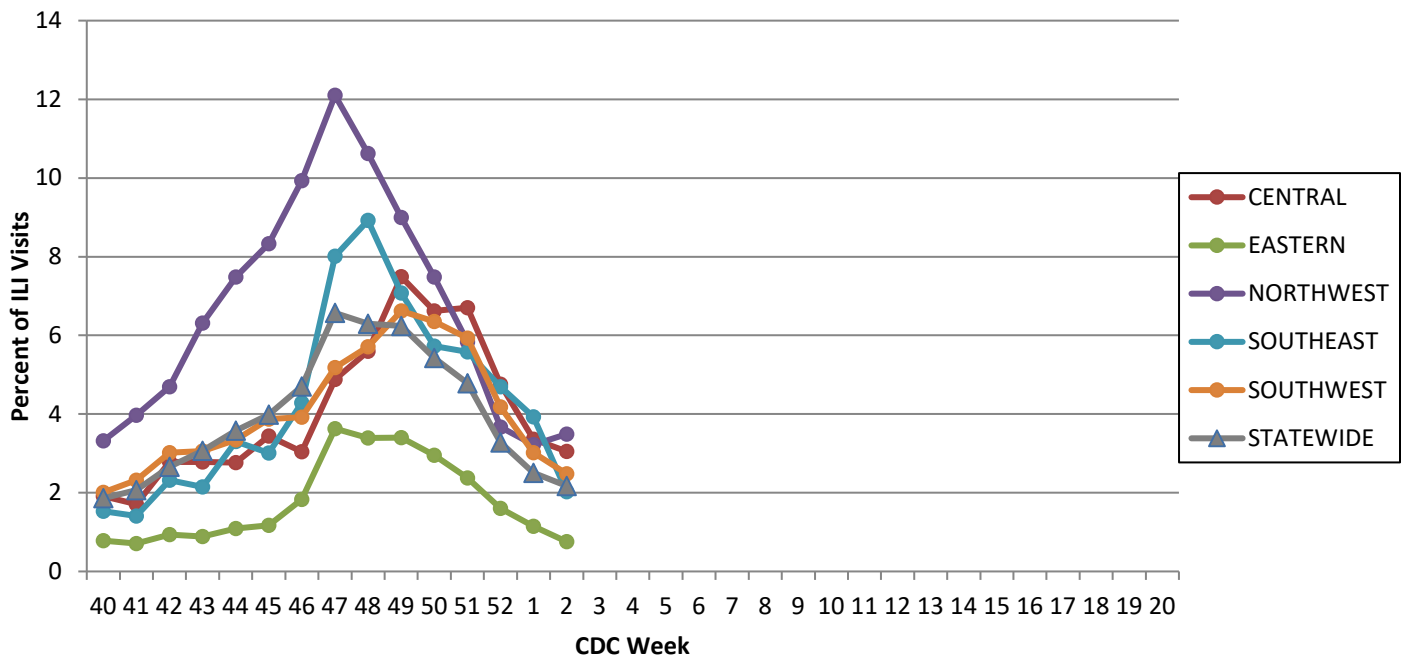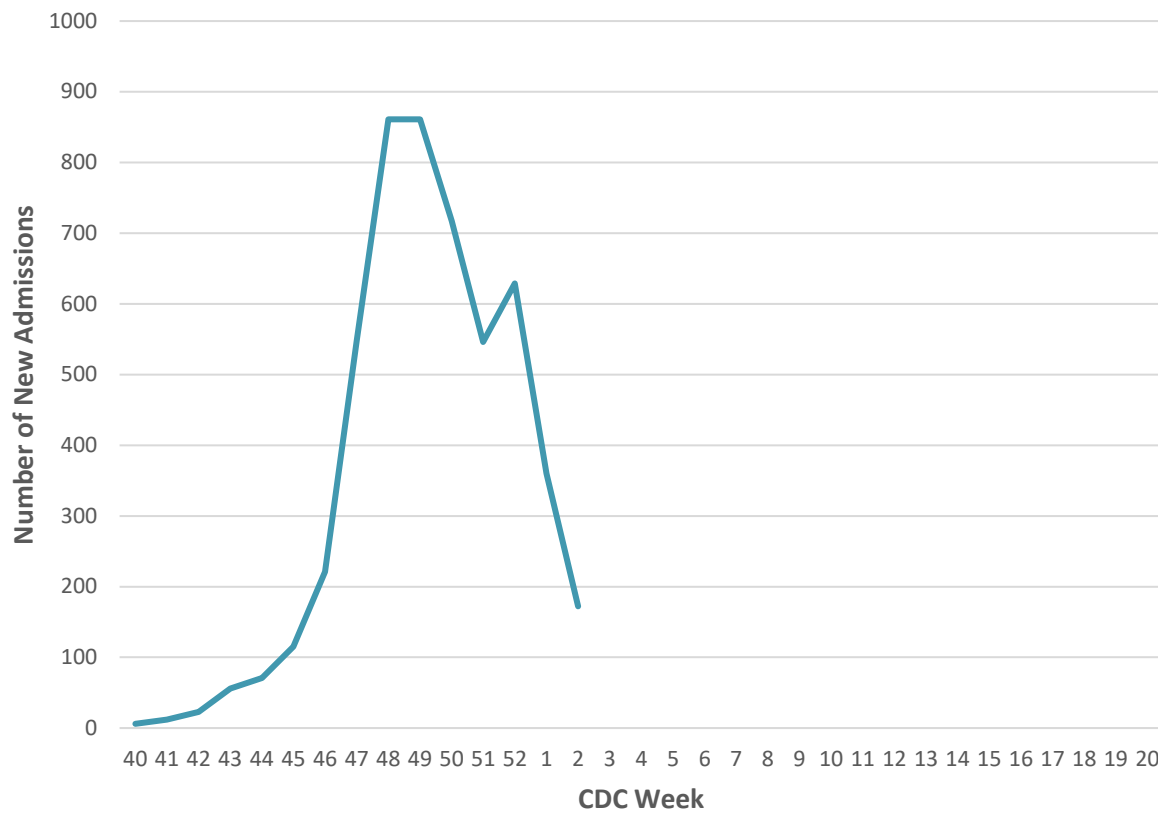2022-2023 season-to-date through the week ending January 14, 2023 (Week 2).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 2, 2022[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 2, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 3: January 15, 2023 – January 21, 2023

All data are preliminary and may change as more reports are received.

Summary:

- Influenza activity continues to be widespread[2] across Missouri but is declining. Overall, Influenza-like illness (ILI) activity remains at Level 4 in the low category.[3]

- During Week 3, a total of 951 laboratory-positive[4] influenza cases (812 influenza A, 128 influenza B and 11 untyped) were reported. The influenza type for reported season-to-date cases includes 95.5% influenza A, 4.1% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 4.0% for Week 3.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE decreased to 2.14 % for Week 3 (Figure 6).[5]

- One hundred forty-five influenza-associated deaths have been reported in Missouri as of Week 1 (week ending January 7, 2023).[6]

- Ten influenza outbreaks and two influenza-associated school closures have been reported as of Week 3.

- Seasonal influenza activity continues to decline nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Widespread is defined as: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state with recent laboratory evidence of influenza in the state.

[3]ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 3**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 3**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 01-03 (January 1, 2023 – January 21, 2023)[*]

Influenza Type	Week 1	Week 2	Week 3	2022-2023[*] Season-to-Date
Influenza A	3,874	1,894	812	98,021
Influenza B	234	210	128	4,231
Influenza Unknown Or Untyped	14	16	11	382
Total	4,122	2,120	951	102,634

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 3 (January 15, 2023 – January 21, 2023)[*‡]

Age Group	Week 3 Cases	Week 3 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	132	35.86	15,212	4,132.80
05-24	320	20.46	43,499	2,781.25
25-49	209	10.76	21,754	1,119.56
50-64	121	10.08	11,242	936.67
65+	169	15.91	10,926	1,028.78
Total	951	15.50	102,634	1,672.26

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 3 (January 15, 2023 – January 21, 2023)[*‡]
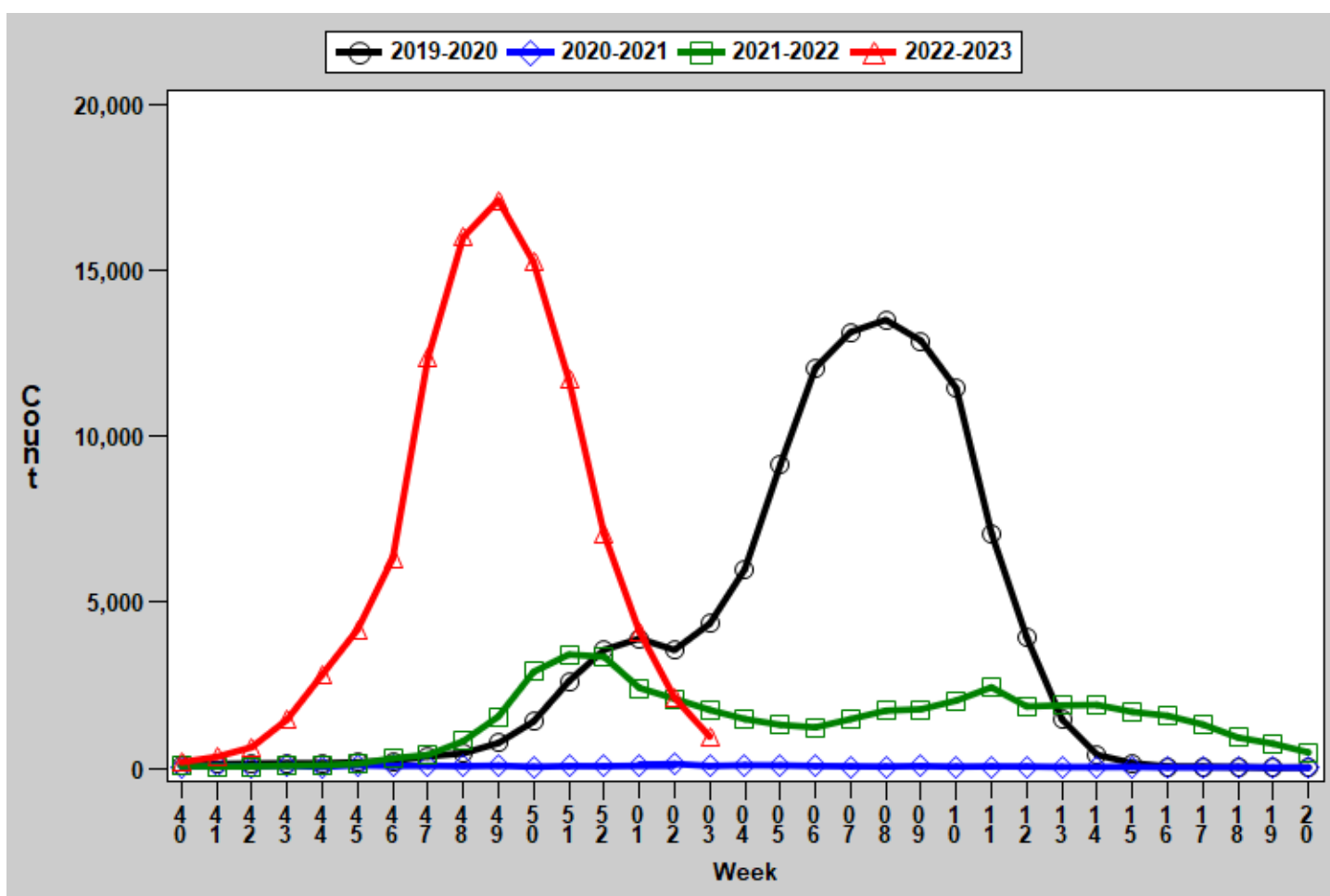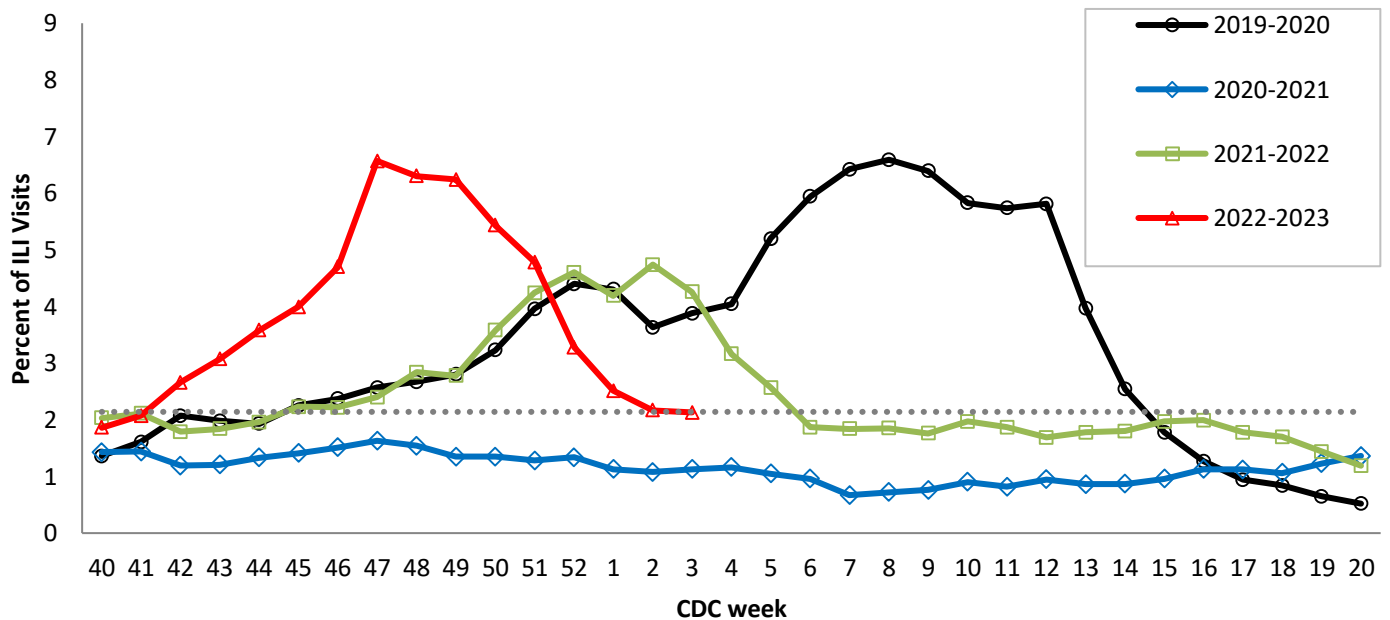
Region	Week 3 Cases	Week 3 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	106	15.71	10,368	1,536.41
Eastern	301	13.27	28,681	1,264.71
Northwest	170	10.39	29,831	1,822.59
Southeast	111	25.67	11,863	2,743.28
Southwest	263	25.03	21,891	2,083.60
Total	951	15.50	102,634	1,672.26

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)

[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[*]2022-2023 season-to-date through the week ending January 21, 2023 (Week 3).Data Source: Missouri Health Information Surveillance System (WebSurv)

Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri
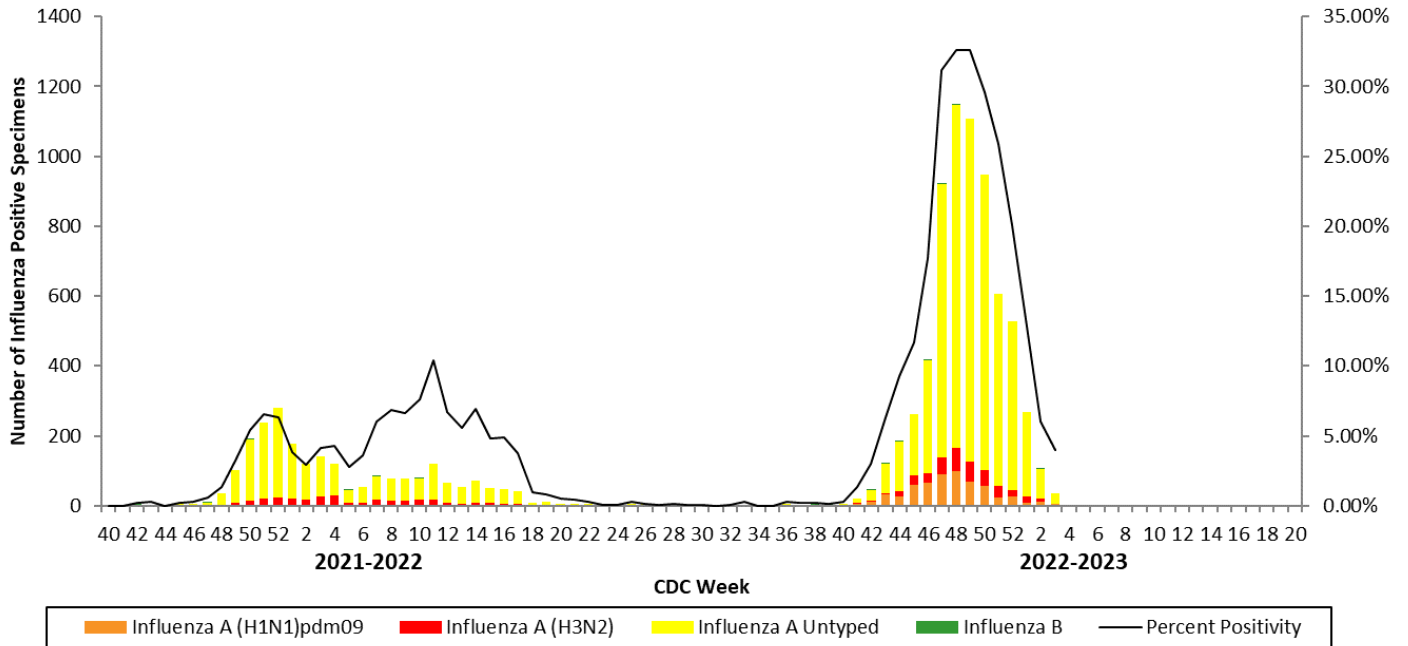
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
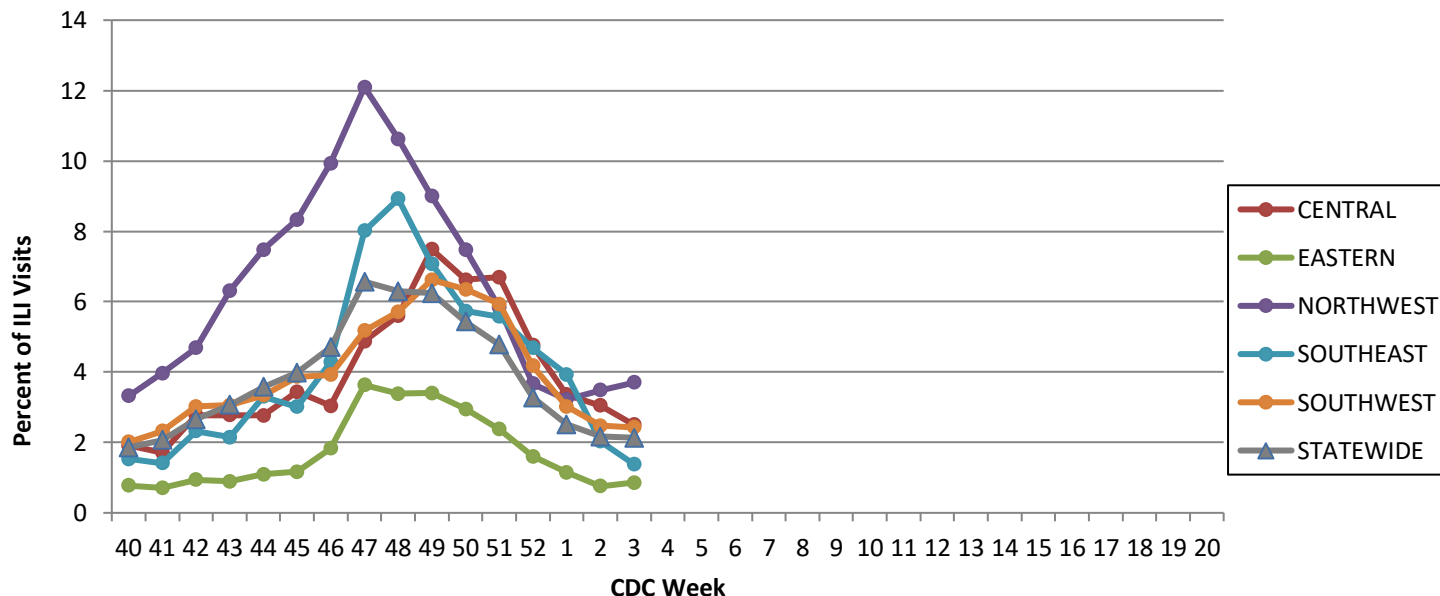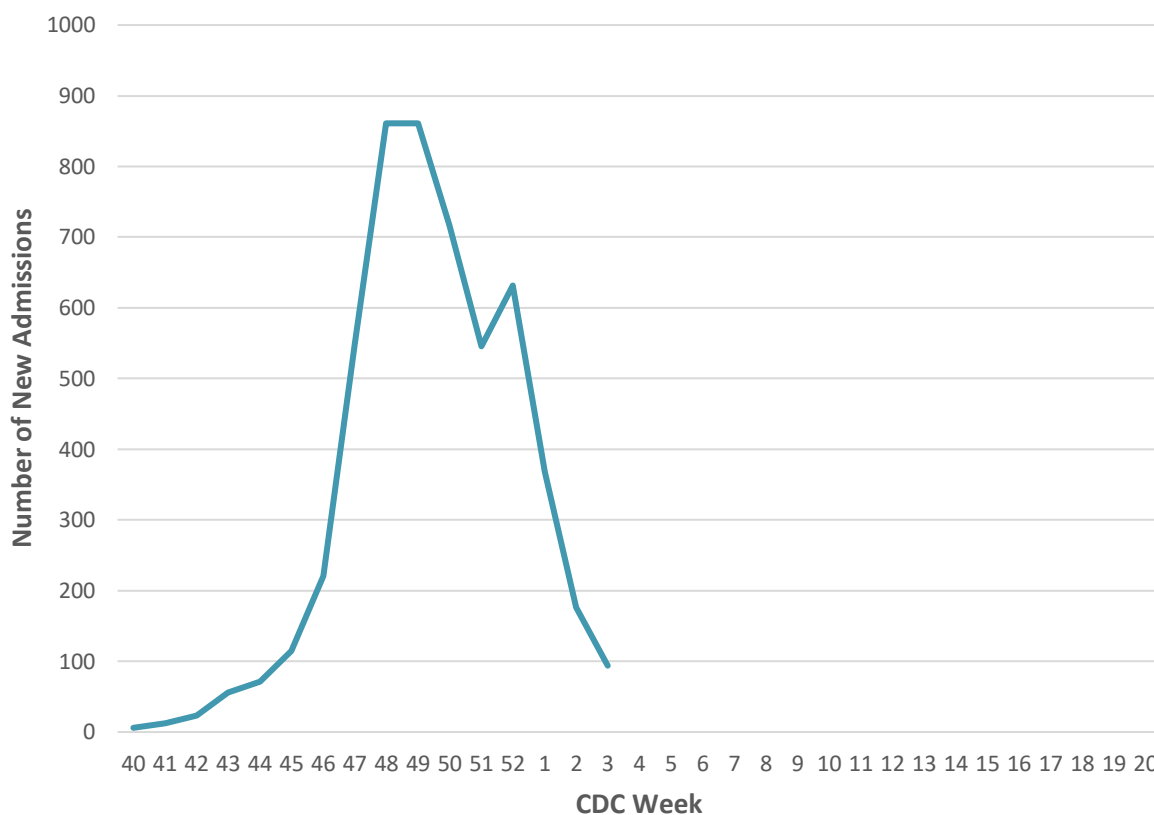2022-2023 season-to-date through the week ending January 21, 2023 (Week 3).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI
visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS),
Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7.   Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 3, 2022[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
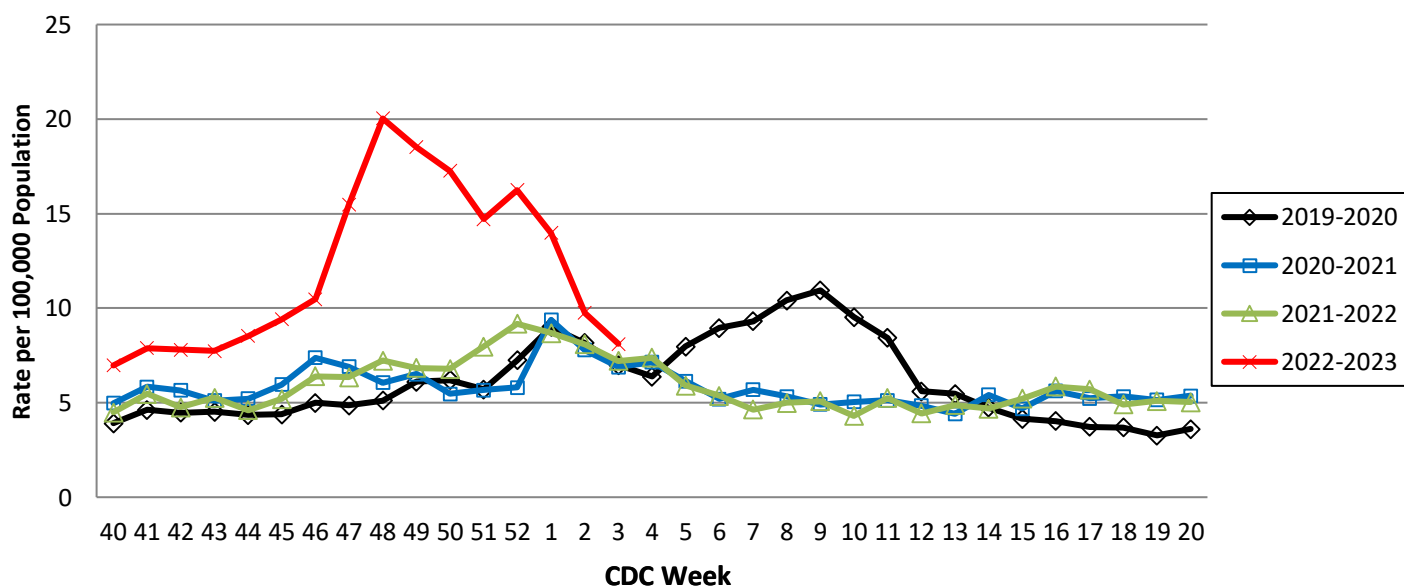[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8.   Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season

Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov.
2022-2023 season-to-date through the week ending January 21, 2022 (Week 3).

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal.
Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 3, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 4: January 22, 2023 – January 28, 2023

All data are preliminary and may change as more reports are received.

Summary:

- Influenza activity has decreased to regional[2] across Missouri but is declining. Overall, Influenza-like illness (ILI) activity decreased to Level 3 in the minimal category.[3]

- During Week 4, a total of 538 laboratory-positive[4] influenza cases (432 influenza A, 100 influenza B and 6 untyped) were reported. The influenza type for reported season-to-date cases includes 95.4% influenza A, 4.3% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 2.3% for Week 3.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE decreased to 2.02 % for Week 4(Figure 6).[5]

- One hundred eighty three influenza-associated deaths have been reported in Missouri as of Week 2 (week ending January 14, 2023).[6]

- Eleven influenza outbreaks and two influenza-associated school closures have been reported as of Week 4.

- Seasonal influenza activity continues to decline nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Regional is defined as: Outbreaks of influenza or increases in ILI and recent laboratory-confirmed influenza in at least two but less than half the regions of the state with recent laboratory evidence of influenza in those regions.

[3]ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 4**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 4**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

**Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type,
Missouri, CDC Weeks 01-03 (January 8, 2023 – January 28, 2023)[*]**

Influenza Type	Week 2	Week 3	Week 4	2022-2023[*] Season-to-Date
Influenza A	1,935	983	432	98,836
Influenza B	217	177	100	4,405
Influenza Unknown Or Untyped	16	14	6	391
Total	2,168	1,174	538	103,632

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

**Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group,
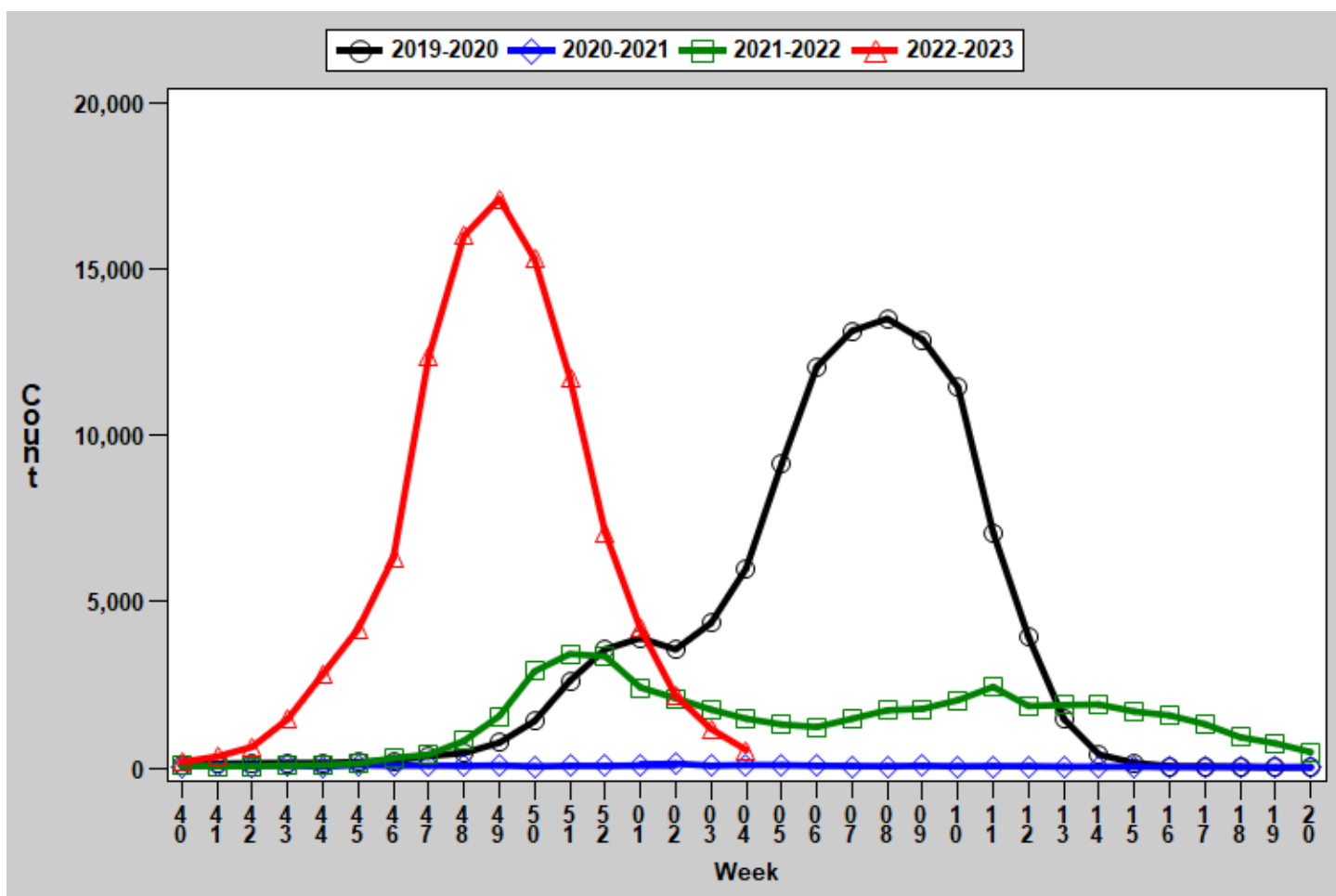Missouri, CDC Week 4 (January 22, 2023 – January 28, 2023)[*‡]**

Age Group	Week 4 Cases	Week 4 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	87	23.64	15,374	4,176.81
05-24	165	10.55	43,832	2,801.97
25-49	125	6.43	21,979	1,131.14
50-64	79	6.58	11,376	947.83
65+	82	7.72	11,079	1,043.18
Total	538	8.77	103,632	1688.52

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
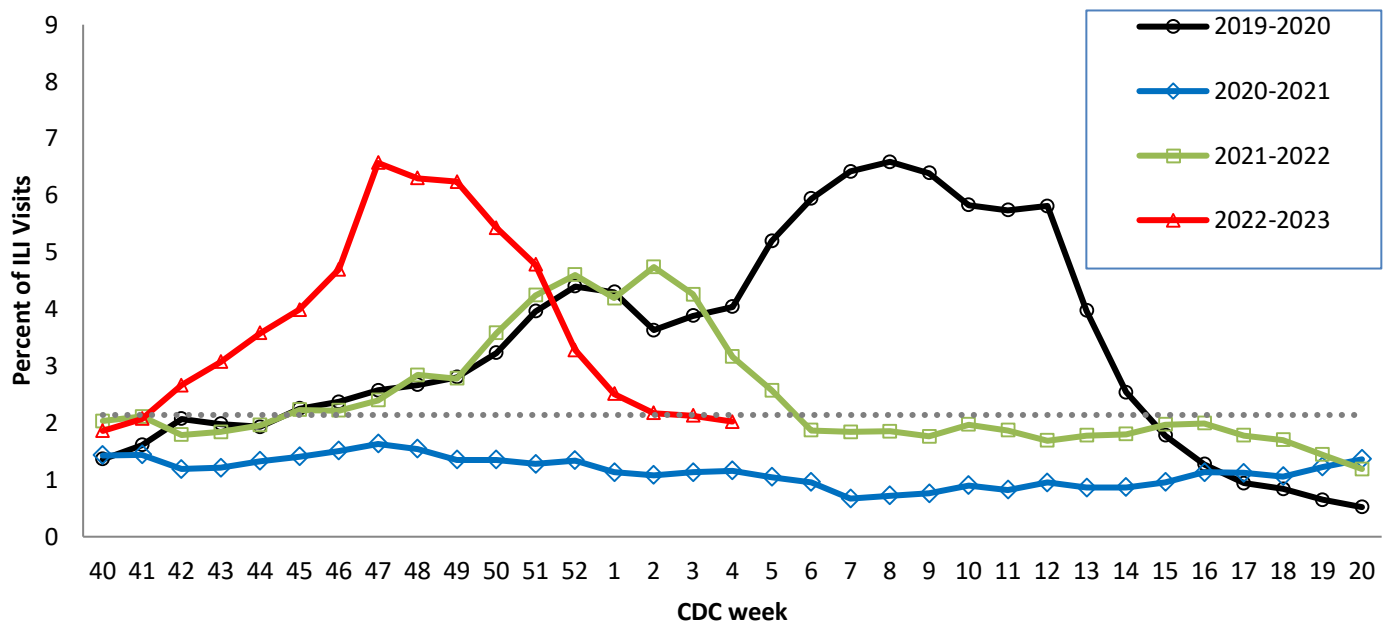[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 4 (January 22, 2023 – January 28, 2023)[*‡]

Region	Week 4 Cases	Week 4 Rate[‡]	2022-23[*] Season-to-Date	2022-23[*] Season-to-Date Rate[‡]
Central	69	10.22	10,551	1,563.53
Eastern	143	6.31	28,834	1,271.46
Northwest	99	6.05	29,971	1,831.14
Southeast	68	15.72	12,091	2,796.01
Southwest	159	15.13	22,185	2,111.59
Total	538	8.77	103,632	1,688.52

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)

[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending January 28, 2023 (Week 34.Data Source: Missouri Health Information Surveillance System (WebSurv)

Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri
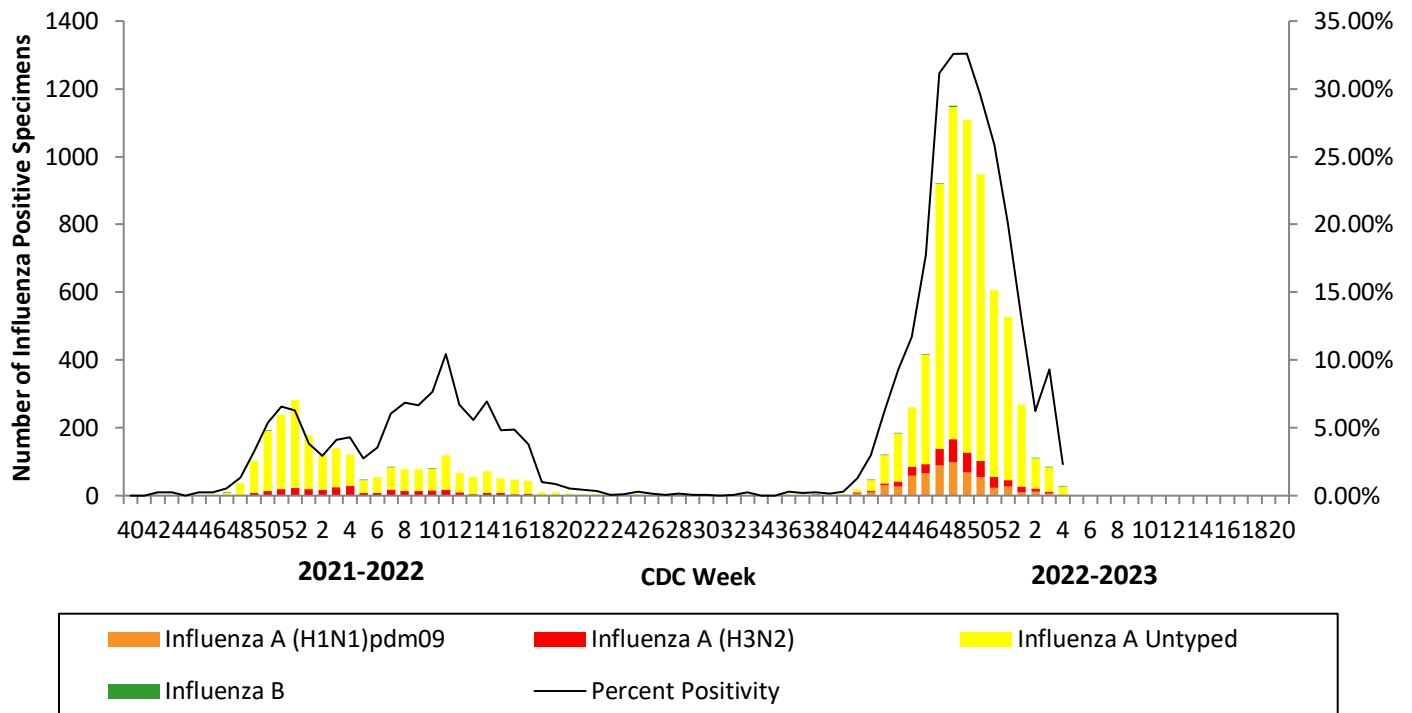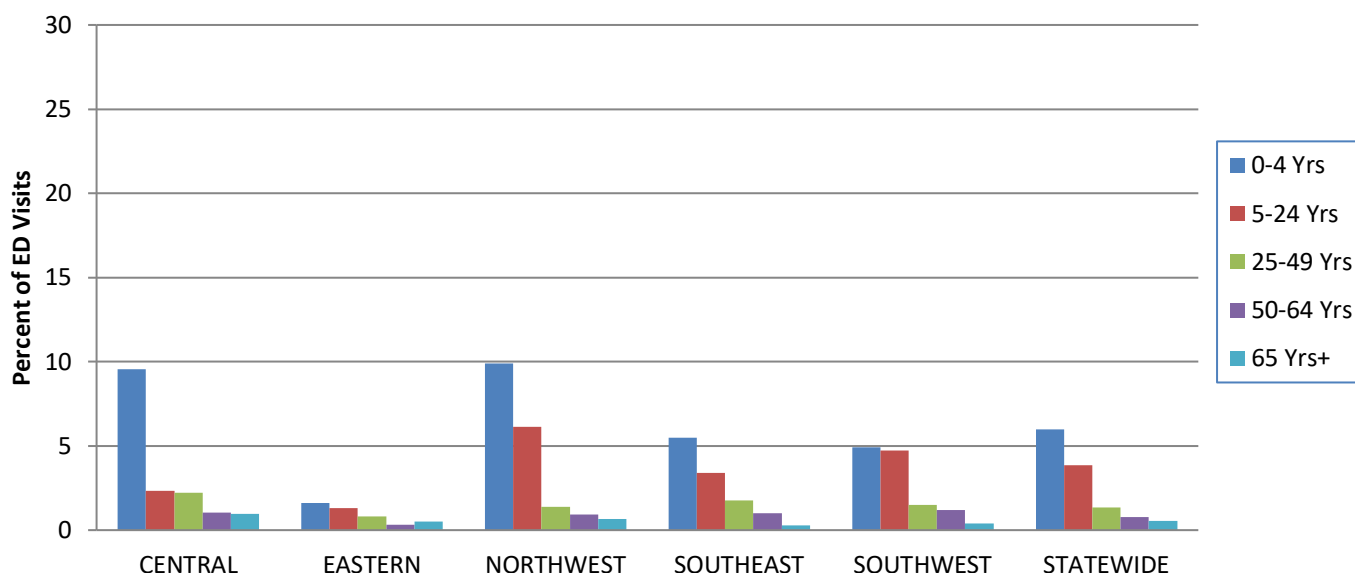

Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
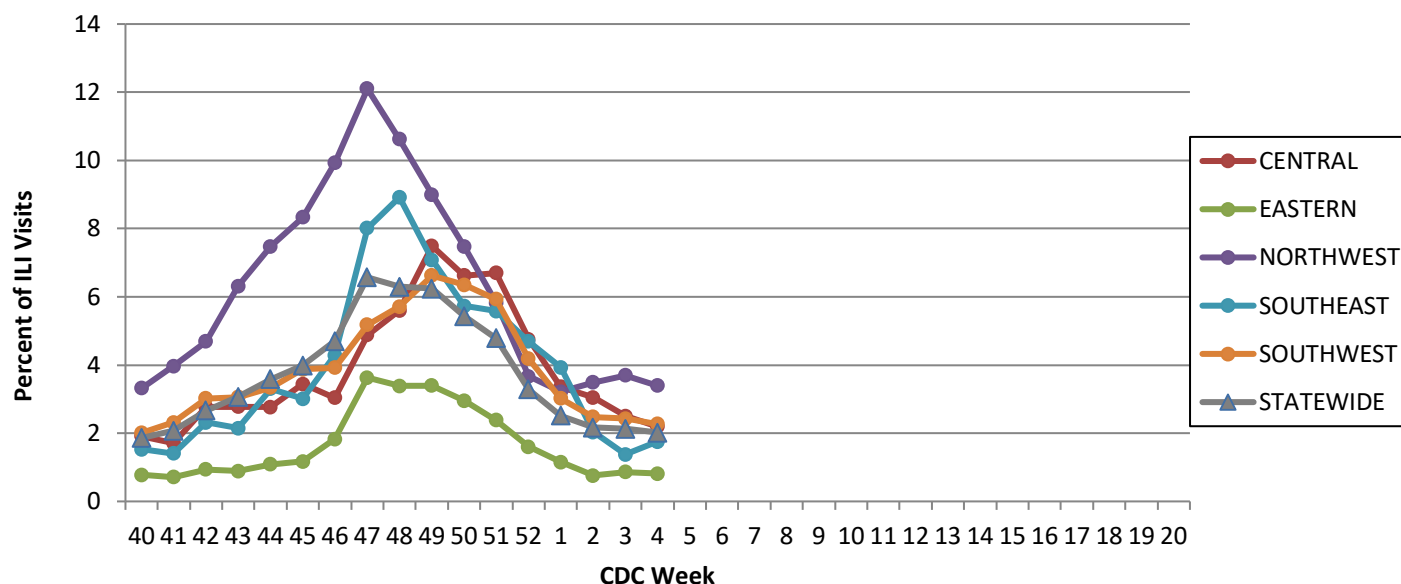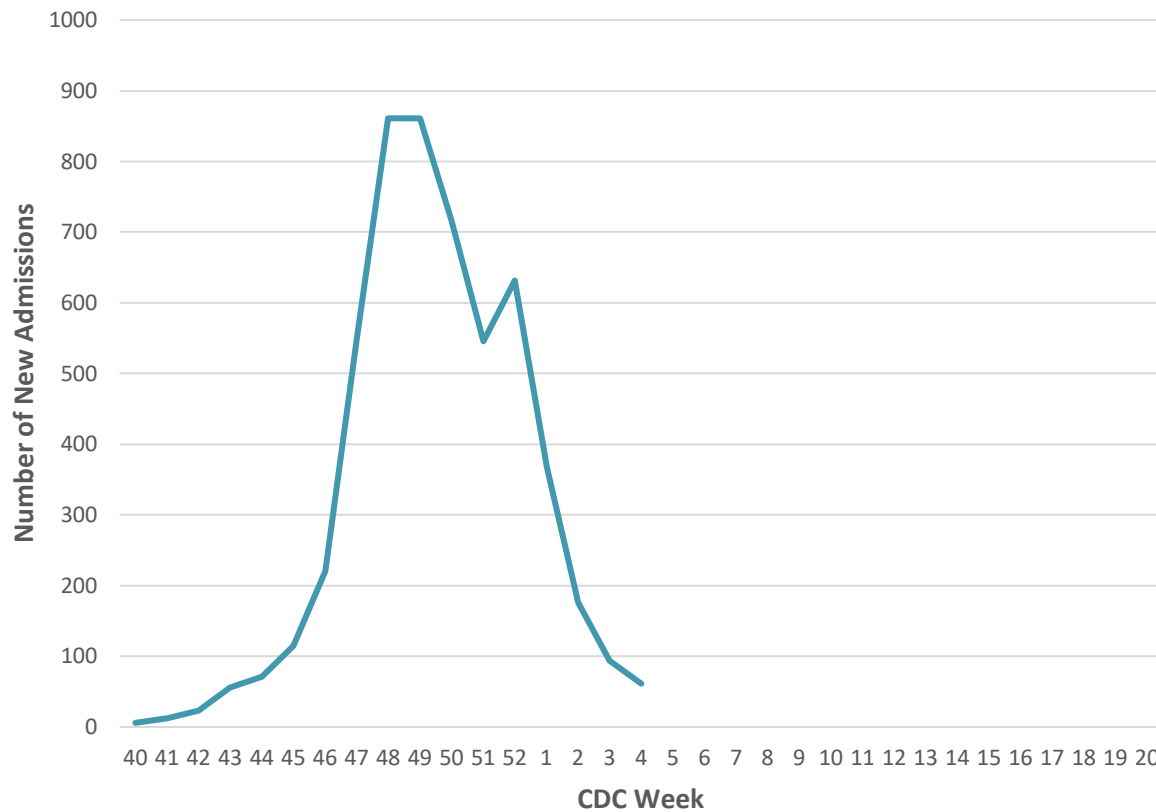2022-2023 season-to-date through the week ending January 28, 2023 (Week 4).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

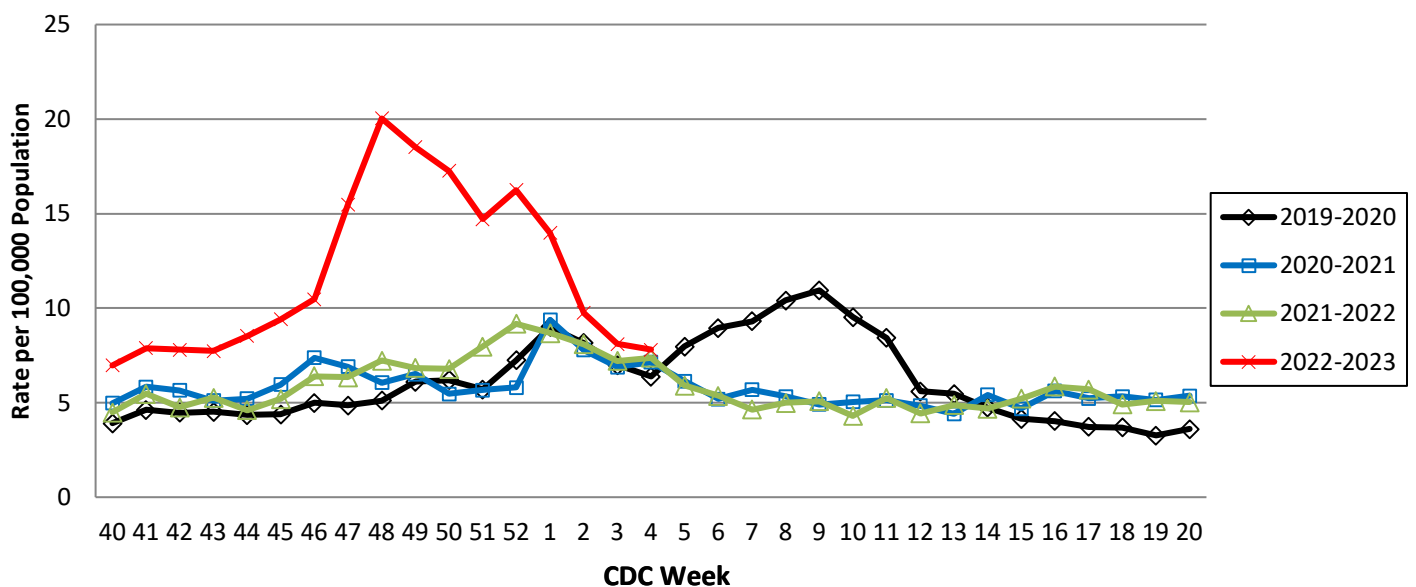**Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 4, 2022[*]**

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]

Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 4, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 5: January 29, 2023 – February 4, 2023

All data are preliminary and may change as more reports are received.

Summary:

- Influenza activity has remained regional[2] across Missouri but is declining. Overall, Influenza-like illness (ILI) activity remains at Level 3 in the minimal category.[3]

- During Week 5 a total of 384 laboratory-positive[4] influenza cases (263 influenza A, 116 influenza B and 5 untyped) were reported. The influenza type for reported season-to-date cases includes 95.2% influenza A, 4.4% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 1.3% for Week 5.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE remained at 2.02 % for Week 5 (Figure 6).[5]

- Two hundred influenza-associated deaths have been reported in Missouri as of Week 3 (week ending January 21, 2023).[6]

- Eleven influenza outbreaks and two influenza-associated school closures have been reported as of Week 5.

- Seasonal influenza activity continues to decline nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Regional is defined as: Outbreaks of influenza or increases in ILI and recent laboratory-confirmed influenza in at least two but less than half the regions of the state with recent laboratory evidence of influenza in those regions.

[3]ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 5**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 5**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 03-05 (January 15, 2023 – February 4, 2023)[*]

Influenza Type	Week 3	Week 4	Week 5	2022-2023[*] Season-to-Date
Influenza A	1,006	547	263	99,273
Influenza B	179	135	116	4,559
Influenza Unknown Or Untyped	12	5	5	393
Total	1,197	687	384	104,225

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 5 (January 29, 2023 – February 4, 2023)[*‡]

Age Group	Week 5 Cases	Week 5 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	49	13.31	15,459	4,199.90
05-24	131	8.38	44,015	2814.24
25-49	101	5.20	22,137	1,139.27
50-64	51	4.25	11,449	953.92
65+	52	4.90	11,164	1,051.19
Total	384	6.26	104,225	1698.19

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 5 (January 29, 2023 – February 4, 2023)[*‡]

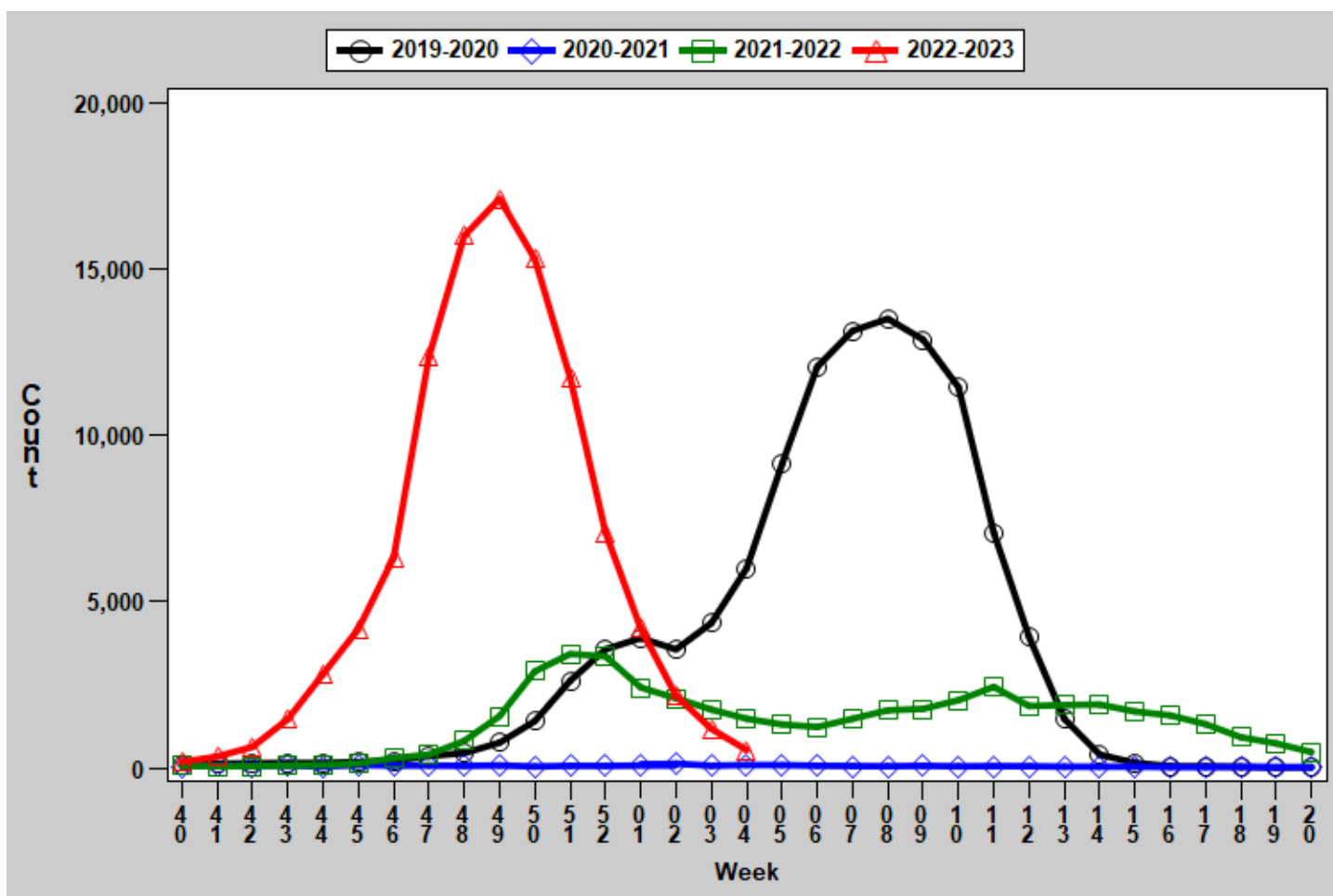| Region	Week 5 Cases	Week 5 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	71	10.52	10,672	1,581.46
Eastern	103	4.54	28,975	1,277.68
Northwest	79	4.83	30,114	1,839.88
Southeast	43	9.94	12,144	2,808.26
Southwest	88	8.38	22,320	2,124.44
Total	384	6.26	104,225	1,698.19

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)

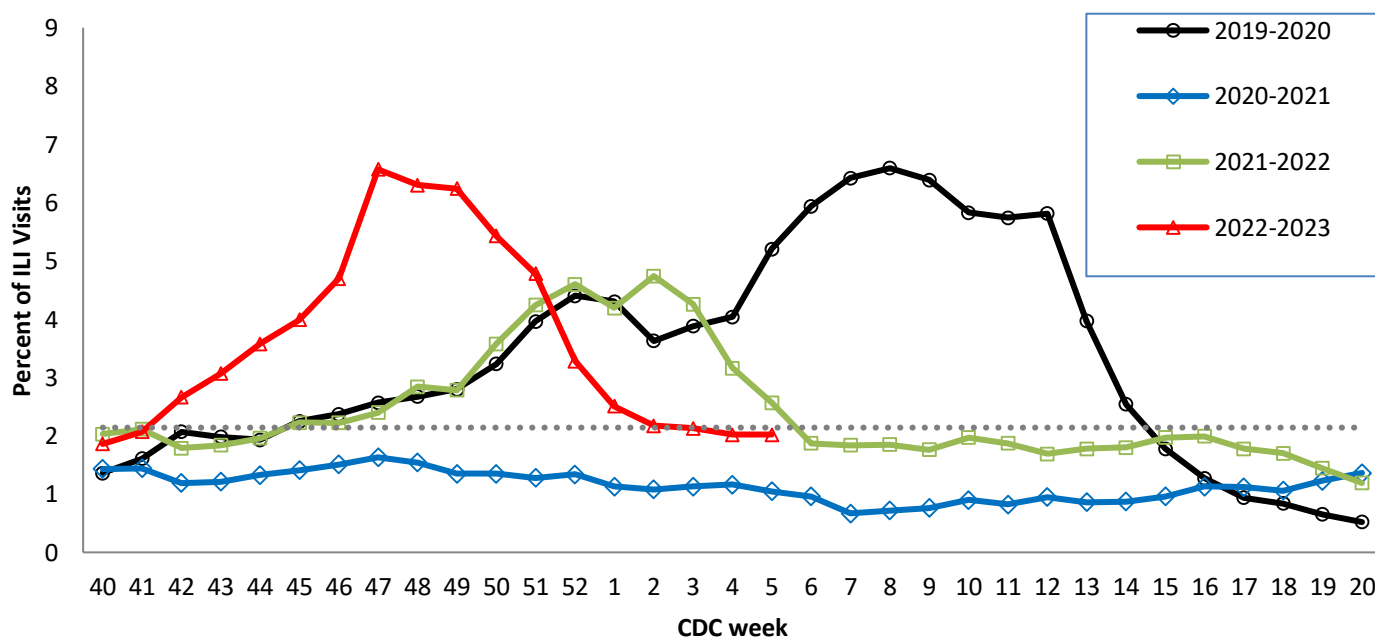[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending February 4, 2023 (Week 34.Data Source: Missouri Health Information Surveillance System (WebSurv)

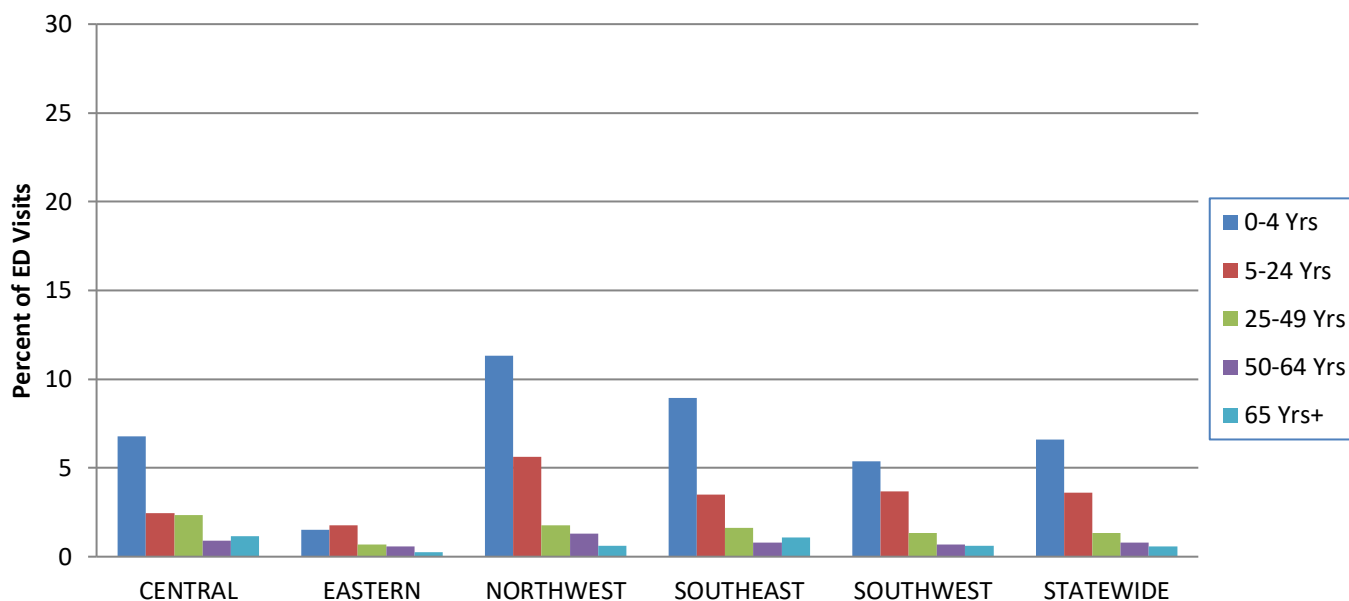**Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri**
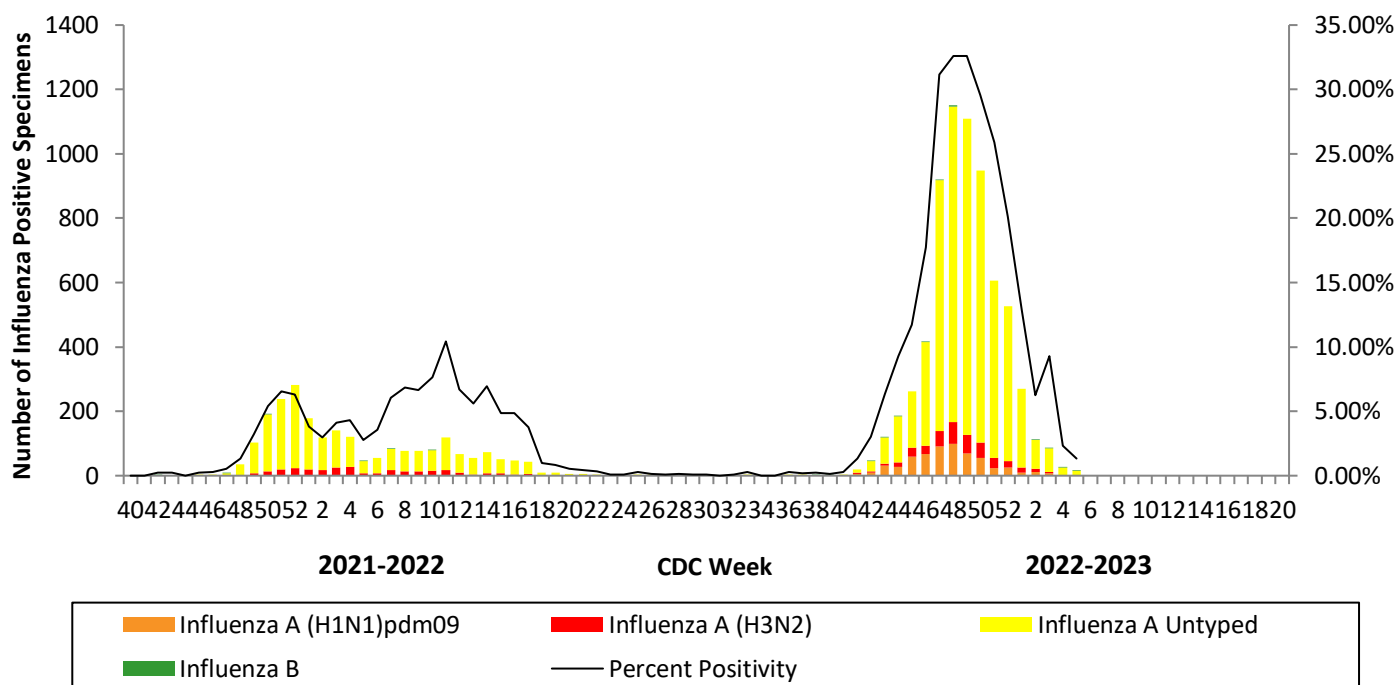
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
2022-2023 season-to-date through the week ending February 4, 2023 (Week 5).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]
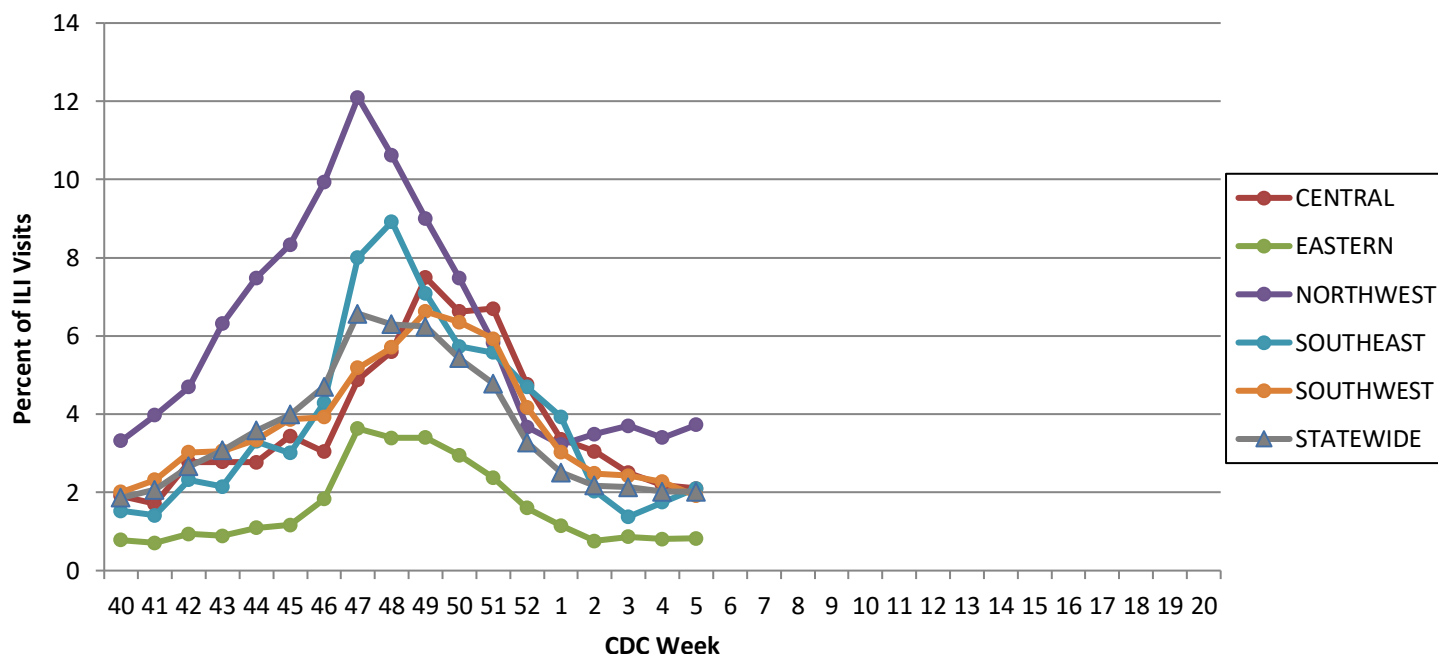

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 5, 2023[*]
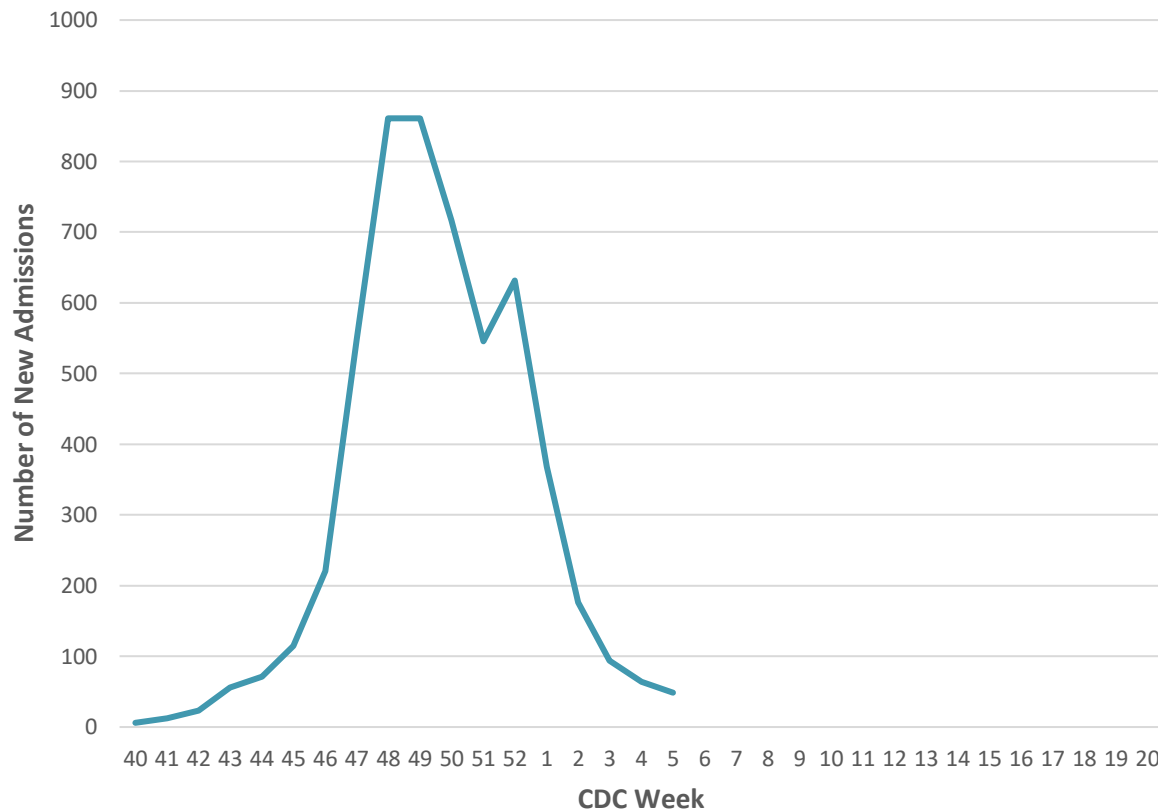

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]
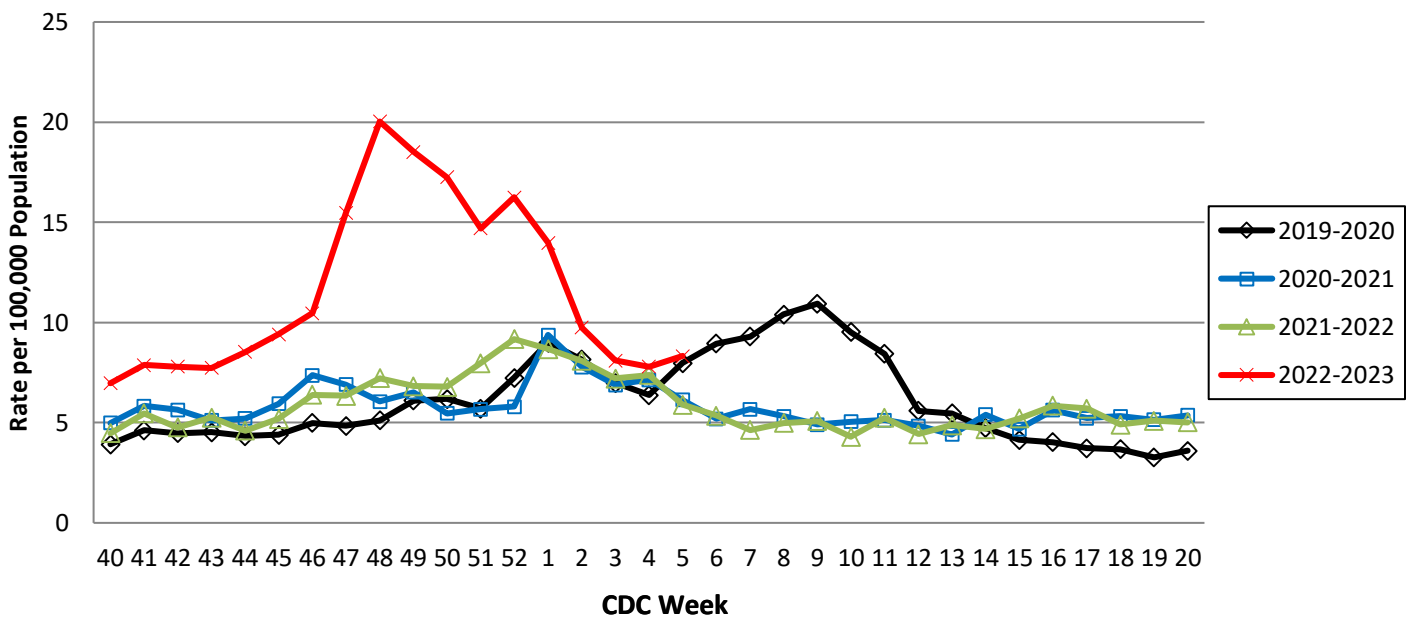

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

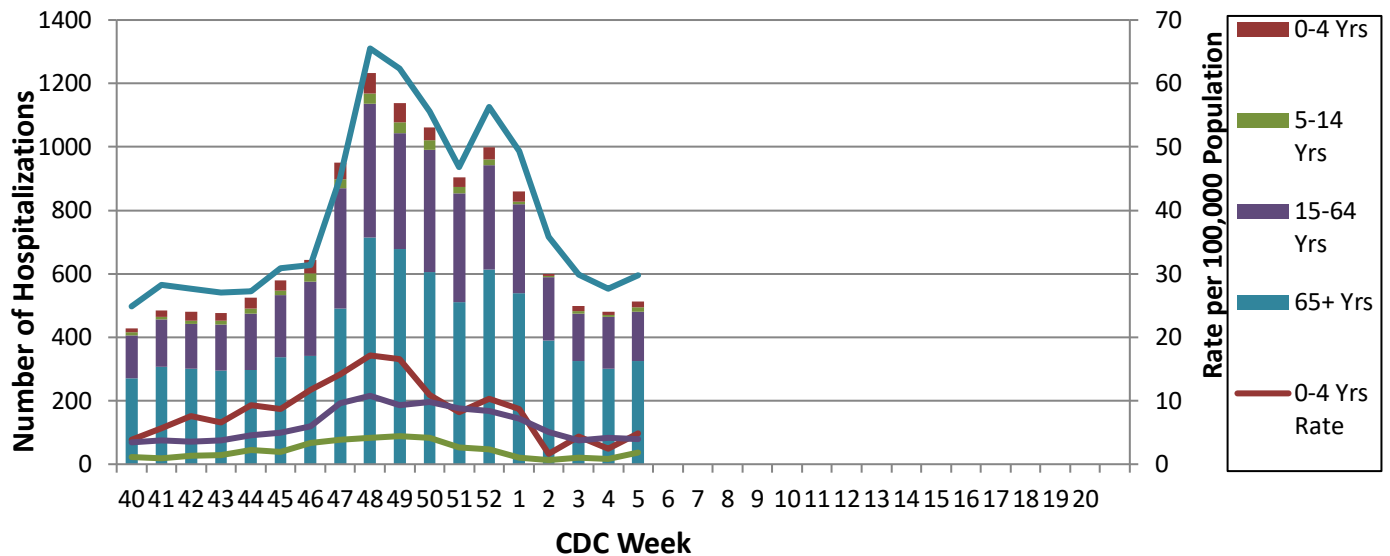**Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season**

Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov.
2022-2023 season-to-date through the week ending February 4, 2023 (Week 5).

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal.
Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 5, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 6: February 5, 2023 – February 11, 2023

All data are preliminary and may change as more reports are received.

Summary:

- Influenza activity remains Regional[2] across Missouri but continues to decline. Overall, Influenza-like illness (ILI) activity remains at Level 3 in the minimal category.[3]

- During Week 6 a total of 256 laboratory-positive[4] influenza cases (167 influenza A, 87 influenza B and 2 untyped) were reported. The influenza type for reported season-to-date cases includes 95.1% influenza A, 4.5% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 0.0% for Week 6. No positive test for influenza were reported by Missouri laboratories participating in the National Respiratory and Enteric Virus Surveillance System (NREVSS) for Week 6.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE remained at 2.01 % for Week 6 (Figure 6).[5]

- Two hundred eleven influenza-associated deaths have been reported in Missouri as of Week 4 (week ending January 28, 2023).[6]

- Eleven influenza outbreaks and two influenza-associated school closures have been reported as of Week 6.

- Seasonal influenza activity continues to decline nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Regional is defined as: Outbreaks of influenza or increases in ILI and recent laboratory-confirmed influenza in at least two but less than half the regions of the state with recent laboratory evidence of influenza in those regions.
..

[3]ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 6**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 6**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 04-06 (January 22, 2023 – February 11, 2023)[*]

Influenza Type	Week 4	Week 5	Week 6	2022-2023[*] Season-to-Date
Influenza A	618	324	167	99,594
Influenza B	174	184	87	4,754
Influenza Unknown Or Untyped	5	5	2	395
Total	797	513	256	104,743

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 6 (February 5, 2023 – February 11, 2023)[*‡]

Age Group	Week 6 Cases	Week 6 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	41	11.14	15,523	4,217.29
05-24	82	5.24	44,188	2,825.30
25-49	59	3.04	22,271	1,146.16
50-64	32	2.67	11,513	959.25
65+	42	3.95	11,247	1,059.00
Total	256	4.17	104,743	1,706.63

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 6 (February 5, 2023 – February 11, 2023)[*‡]
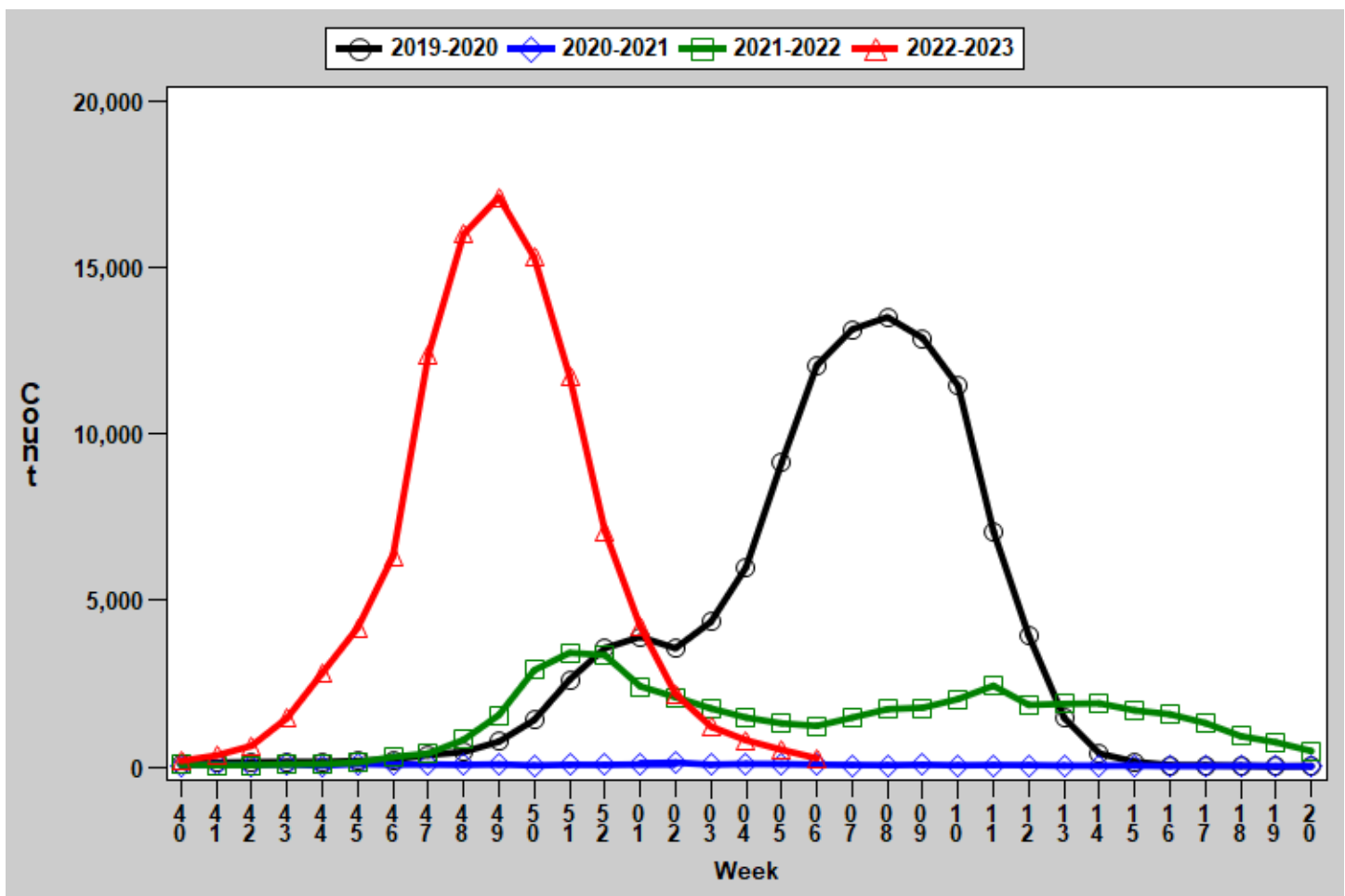
Region	Week 6 Cases	Week 6 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	51	7.56	10,738	1,591.24
Eastern	81	3.57	29,070	1,281.86
Northwest	67	4.09	30,252	1,848.31
Southeast	11	2.54	12,181	2,816.82
Southwest	46	4.38	22,502	2,141.76
Total	256	4.17	104,743	1,706.63

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
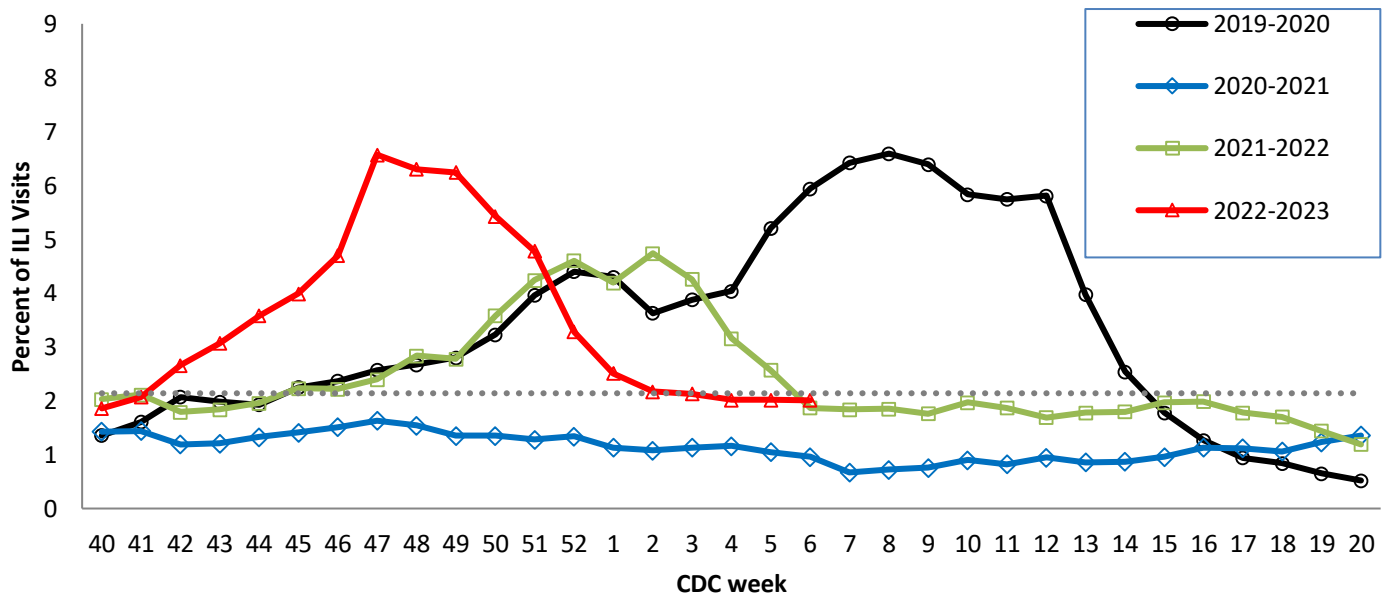[*]2022-2023 season-to-date through the week ending February 11, 2023 (Week 6). .Data Source: Missouri Health Information Surveillance System (WebSurv)

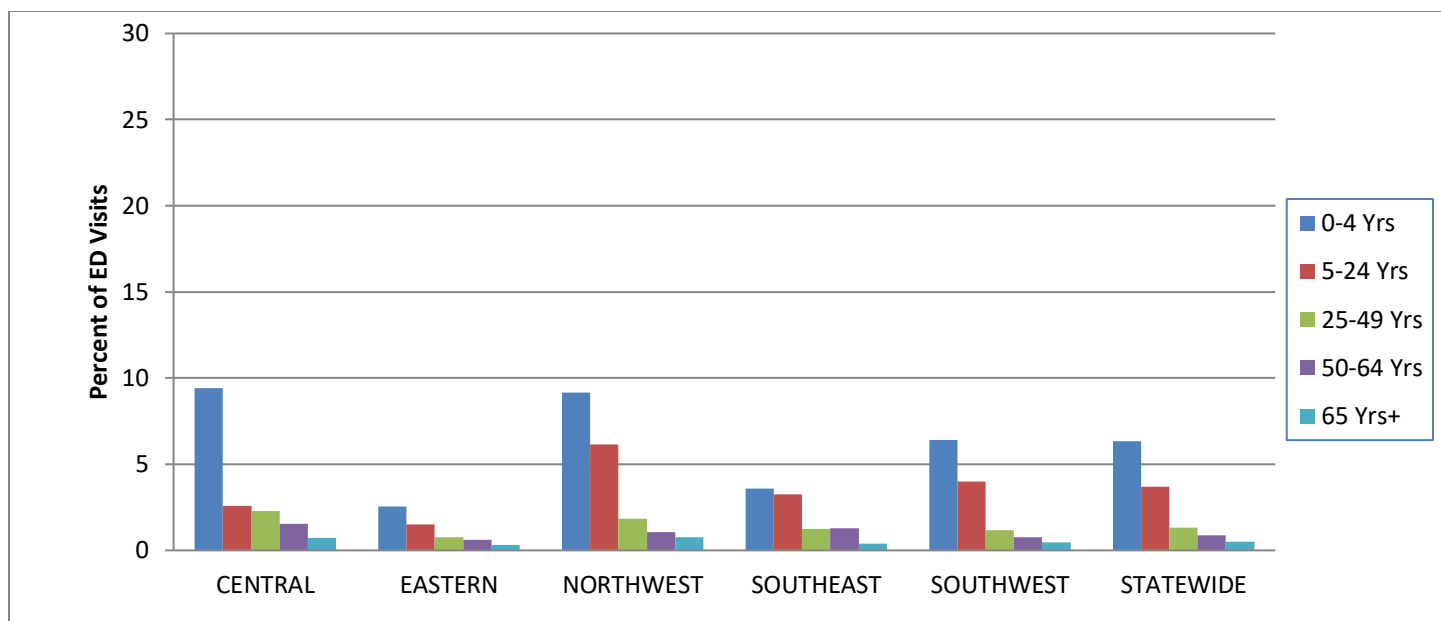**Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri**
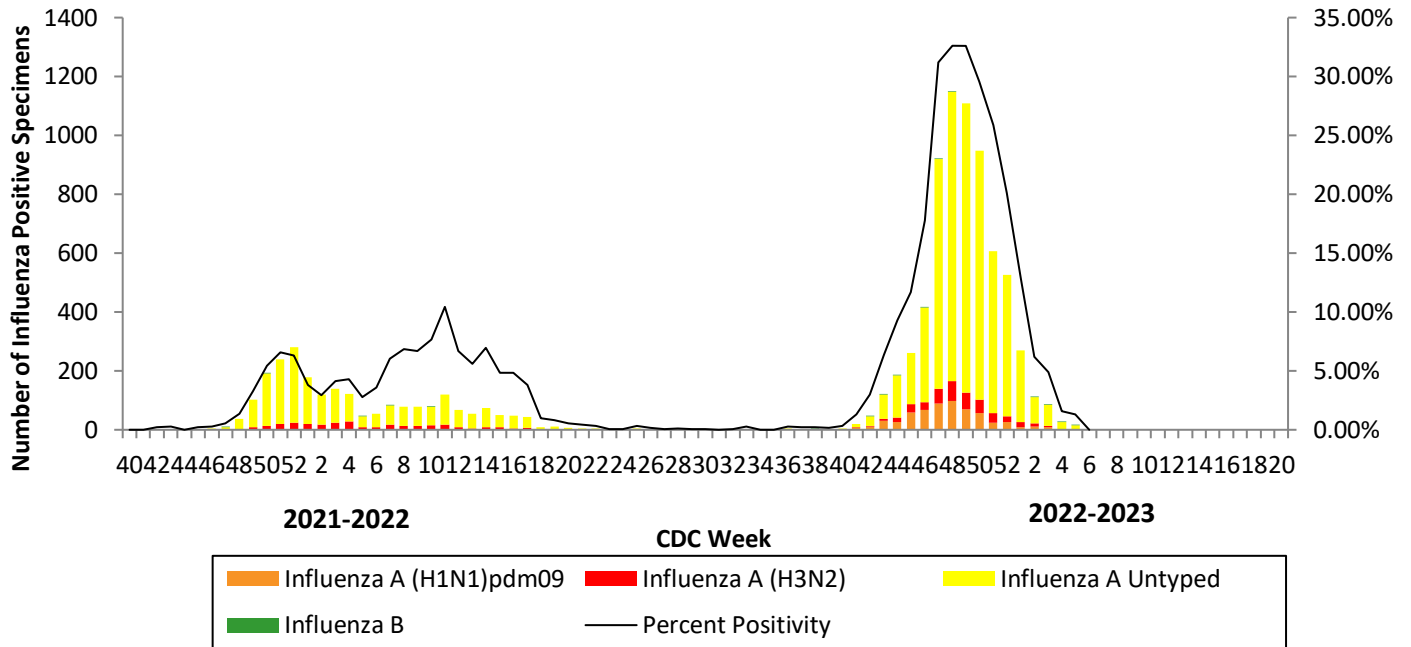
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC). 2022-2023 season-to-date through the week ending February 11, 2023 (Week 6).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]
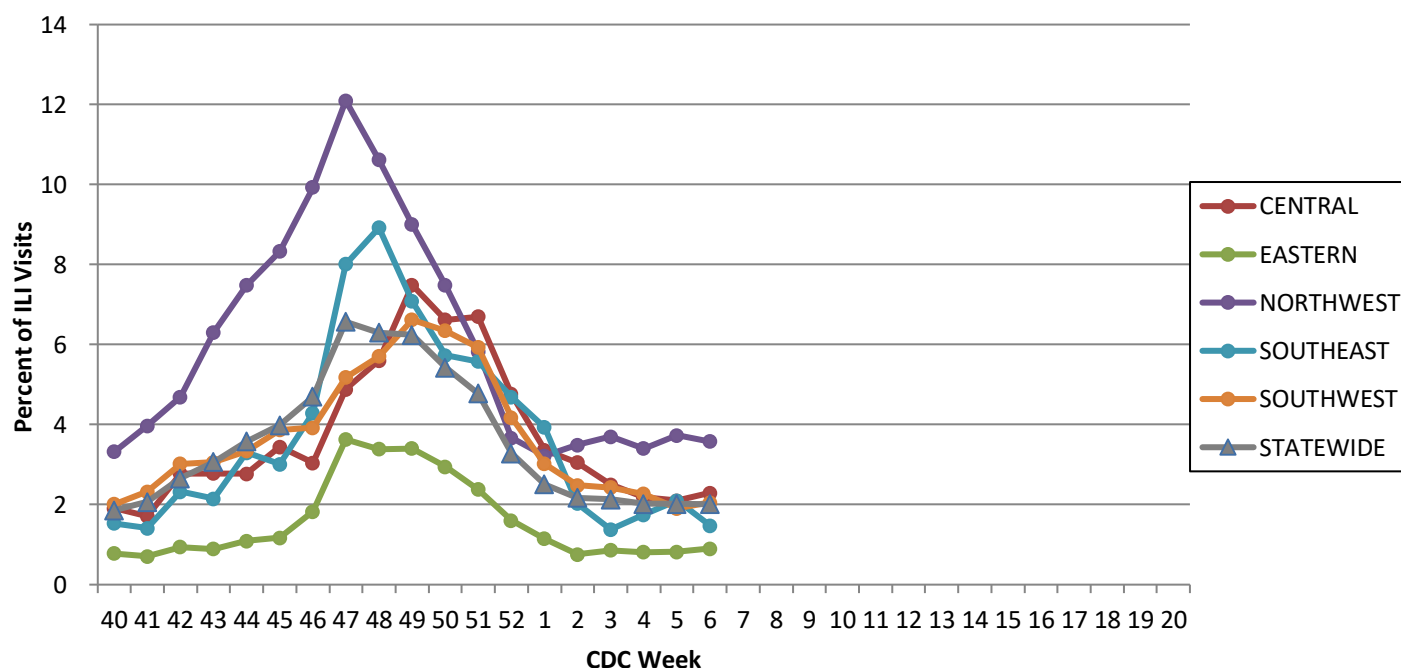

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 6, 2023[*]
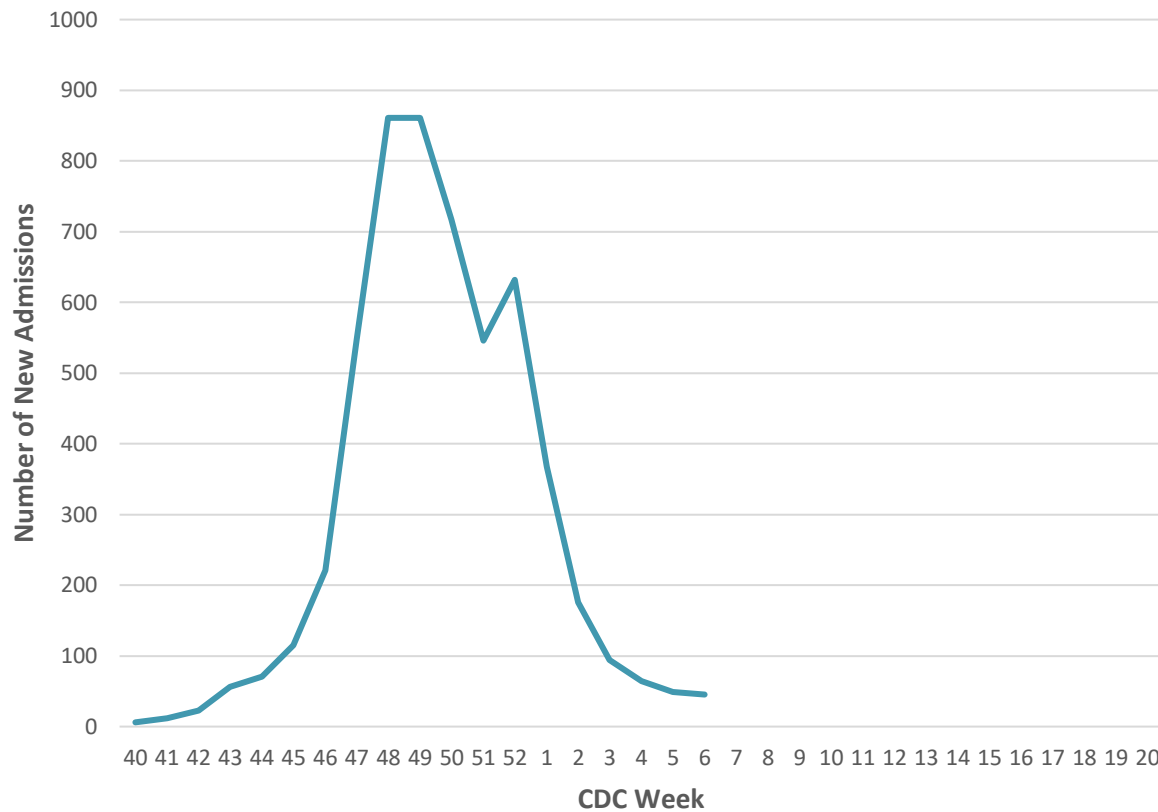

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]
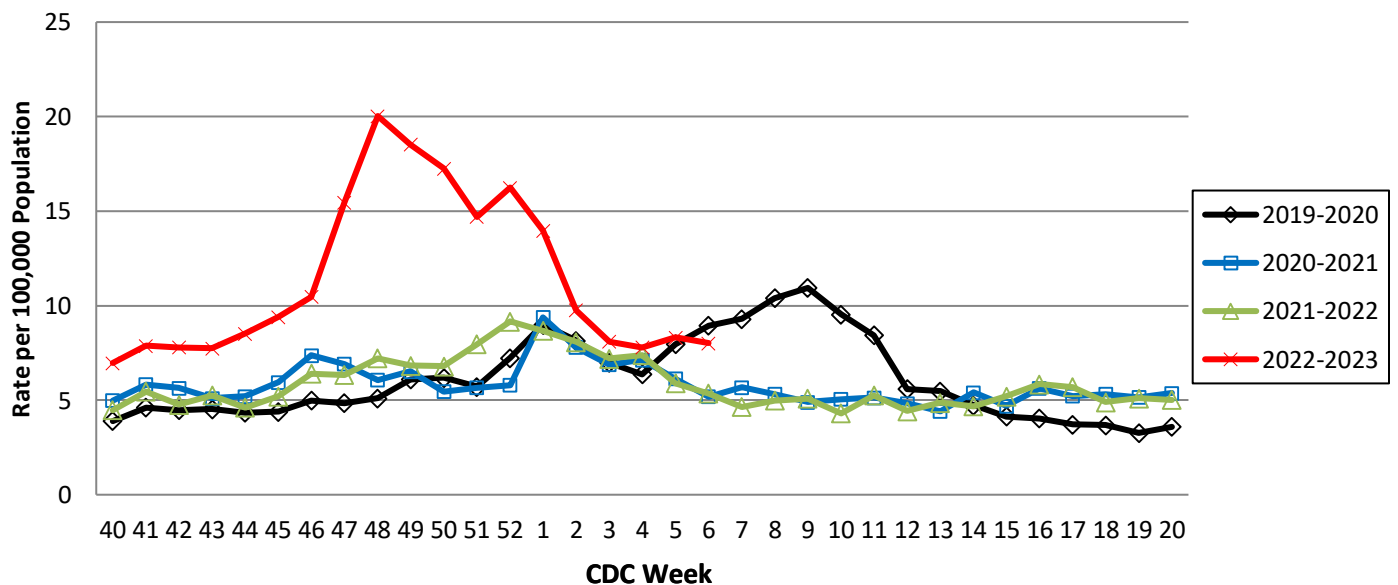

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

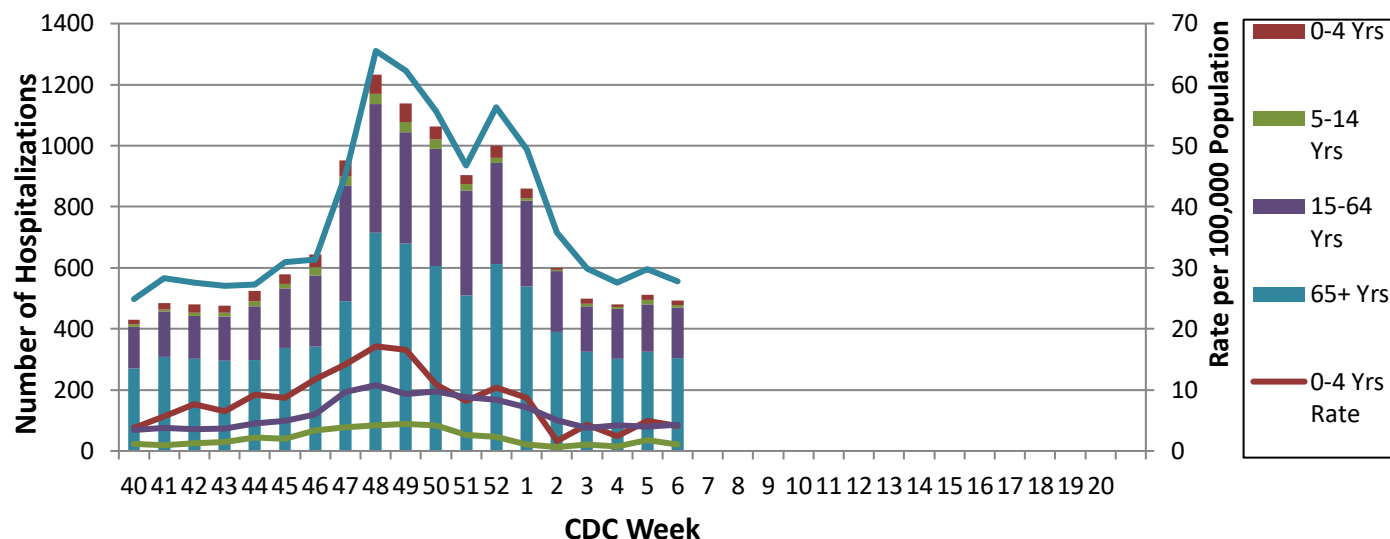**Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season**

Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov.
2022-2023 season-to-date through the week ending February 11, 2023 (Week 6).

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal.
Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 6, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 7: February 12, 2023 – February 18, 2023

All data are preliminary and may change as more reports are received.

Summary:

- Influenza activity has decreased to Local[2] across Missouri and continues to decline. Overall, Influenza-like illness (ILI) activity remains at Level 4 in the low category.[3]

- During Week 7 a total of 241 laboratory-positive[4] influenza cases (137 influenza A, 104 influenza B and 0 untyped) were reported. The influenza type for reported season-to-date cases includes 94.9% influenza A, 4.6% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 0.6% for Week 7.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE remained at 2.10 % for Week 7 (Figure 6).[5]

- Two hundred twenty one influenza-associated deaths have been reported in Missouri as of Week 5 (week ending February 4, 2023).[6]

- Eleven influenza outbreaks and two influenza-associated school closures have been reported as of Week 7.

- Seasonal influenza activity continues to decline nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Local is defined as: Outbreaks of influenza or increase in ILI cases and recent laboratory-confirmed influenza in a single region of the state...
[3]ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 7**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 7**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 05-07 (January 29, 2023 – February 18, 2023)[*]

Influenza Type	Week 5	Week 6	Week 7	2022-2023[*] Season-to-Date
Influenza A	336	209	137	99,813
Influenza B	192	120	104	4,906
Influenza Unknown Or Untyped	5	19	0	413
Total	533	348	241	105,132

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 7 (February 12, 2023 – February 18, 2023)[*‡]

Age Group	Week 7 Cases	Week 7 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	35	9.51	15,570	4,230.06
05-24	85	5.43	44,336	2,834.77
25-49	46	2.37	22,352	1,150.33
50-64	40	3.33	11,564	963.50
65+	35	3.30	11,307	1,064.84
Total	241	3.93	105,132	1,712.97

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 7 (February 12, 2023 – February 18, 2023)[*‡]
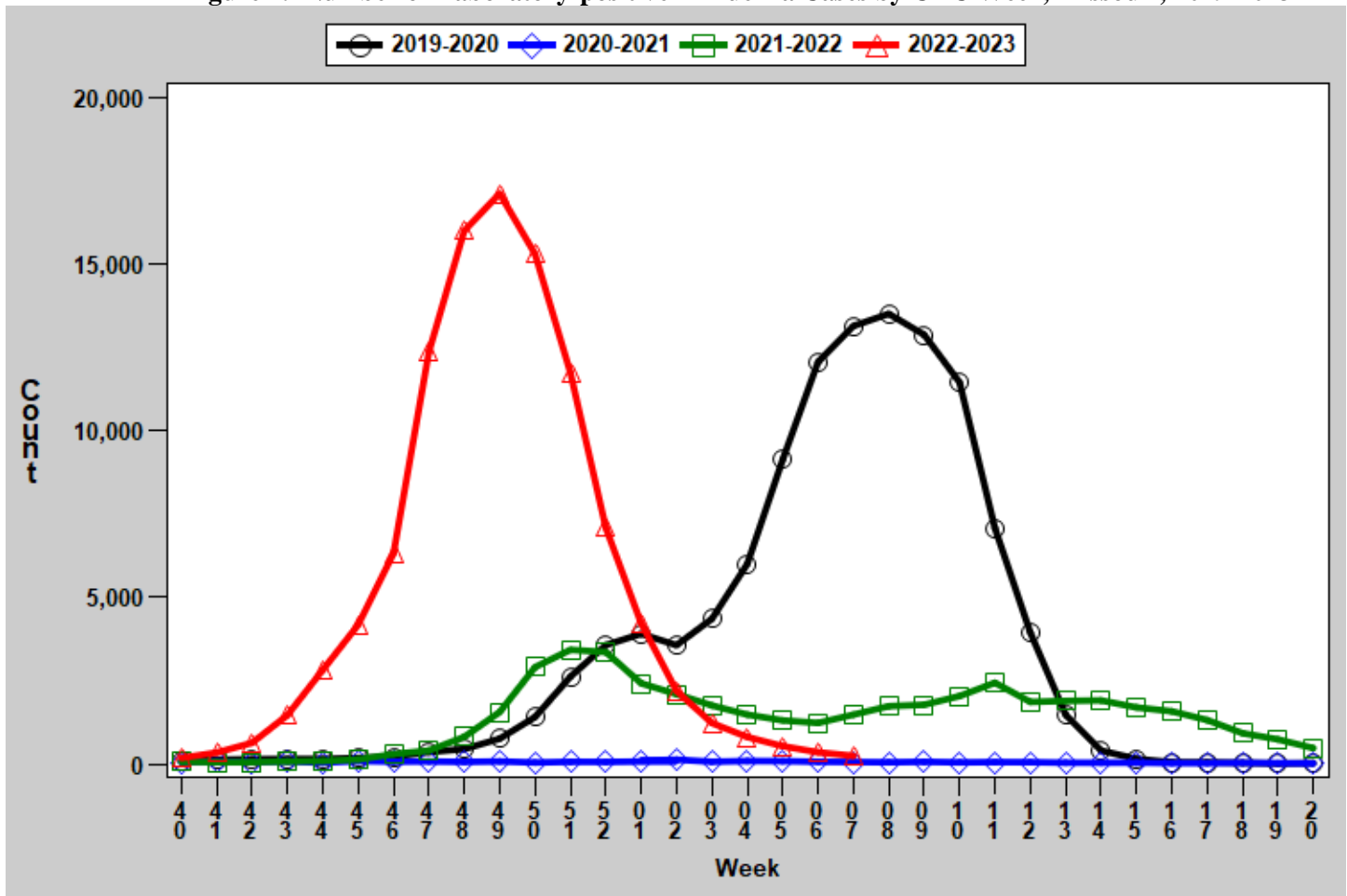
Region	Week 7 Cases	Week 7 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	43	6.37	10,794	1,599.54
Eastern	78	3.44	29,182	1,286.80
Northwest	35	2.14	30,347	1,854.11
Southeast	22	5.09	12,231	2,828.38
Southwest	63	6.00	22,578	2,148.99
Total	241	3.93	105,132	1,712.97

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
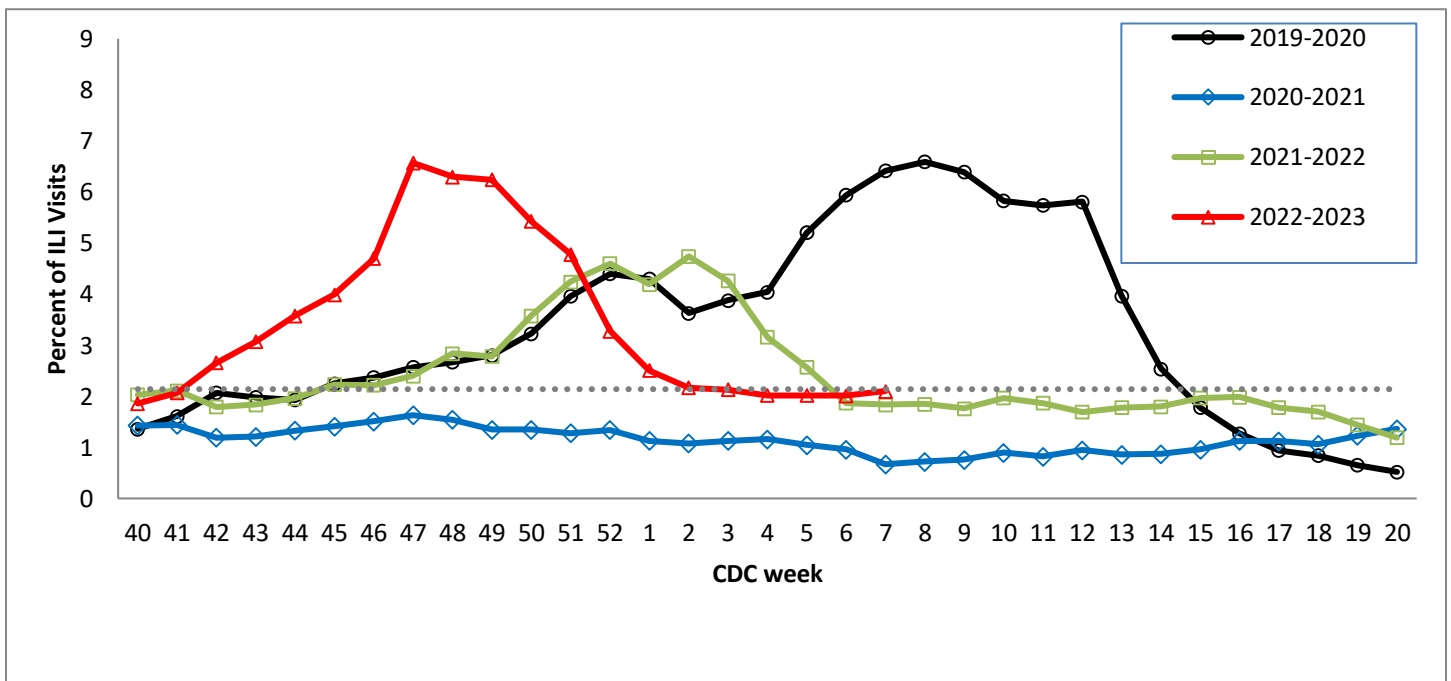[*]2022-2023 season-to-date through the week ending February 18, 2023 (Week 7). .Data Source: Missouri Health Information Surveillance System (WebSurv)

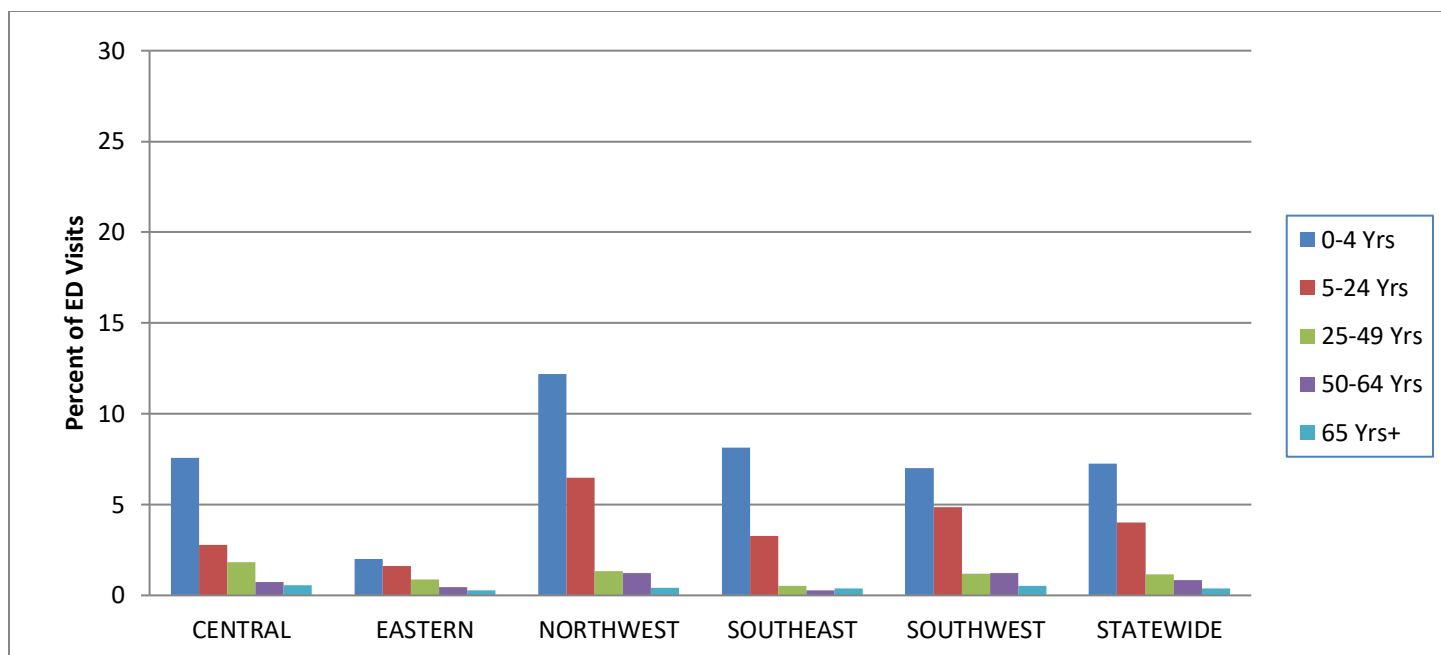**Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri**
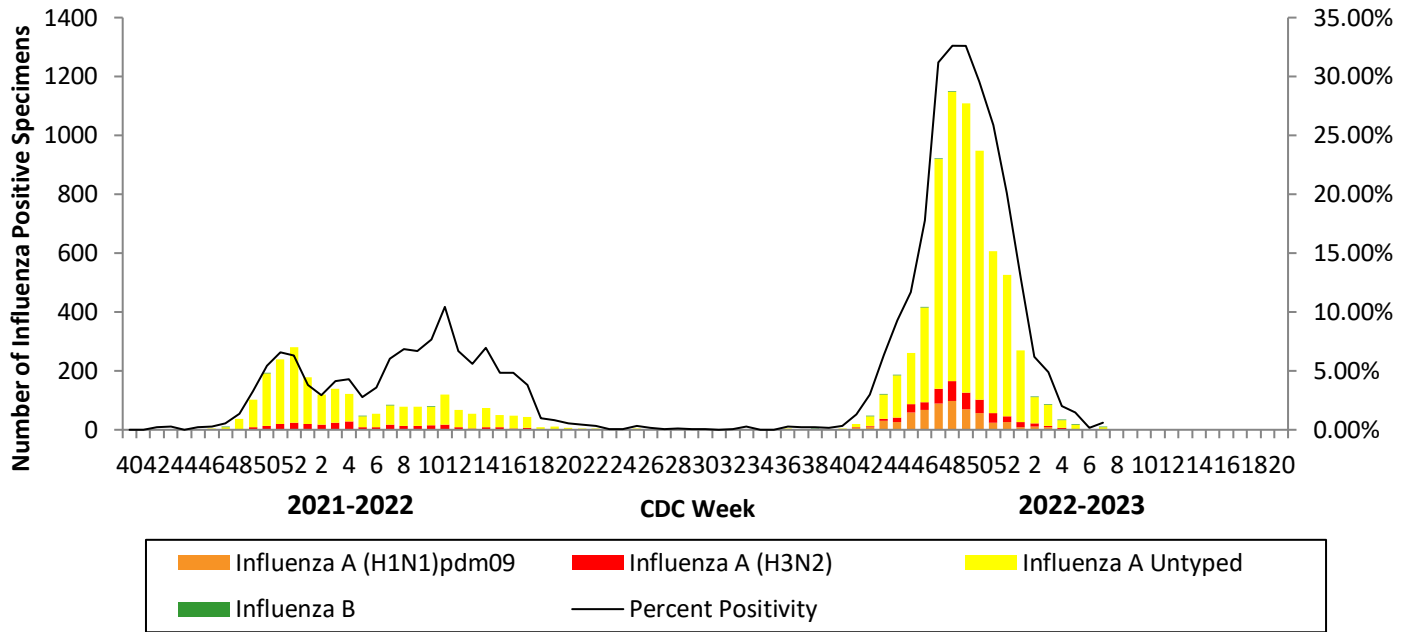
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
2022-2023 season-to-date through the week ending February 18, 2023 (Week 7).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]
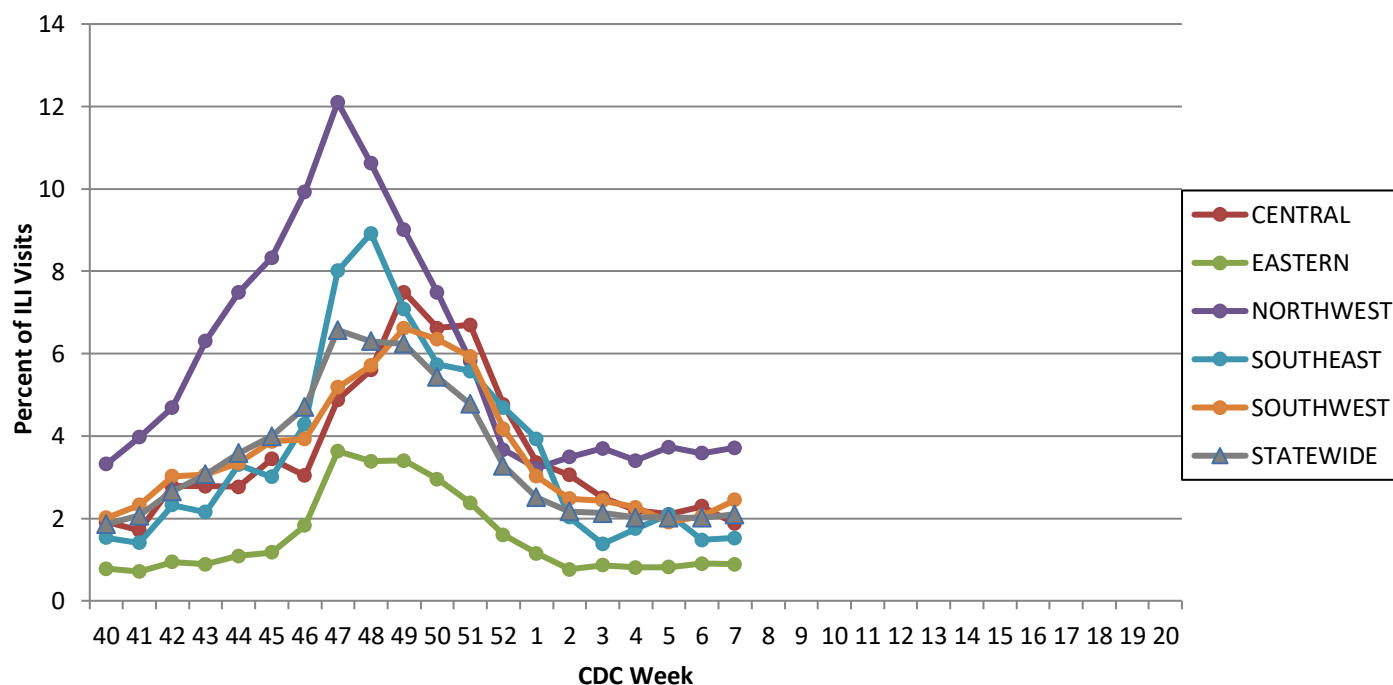

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 7, 2023[*]
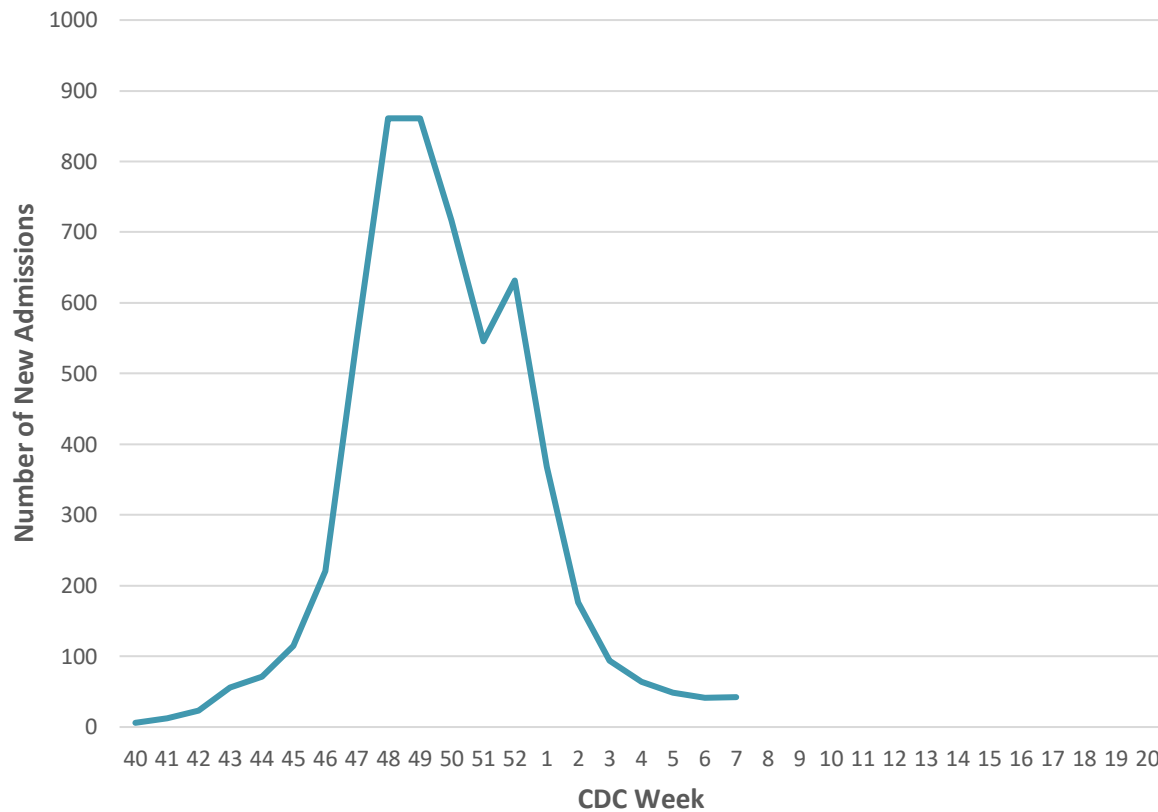

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]
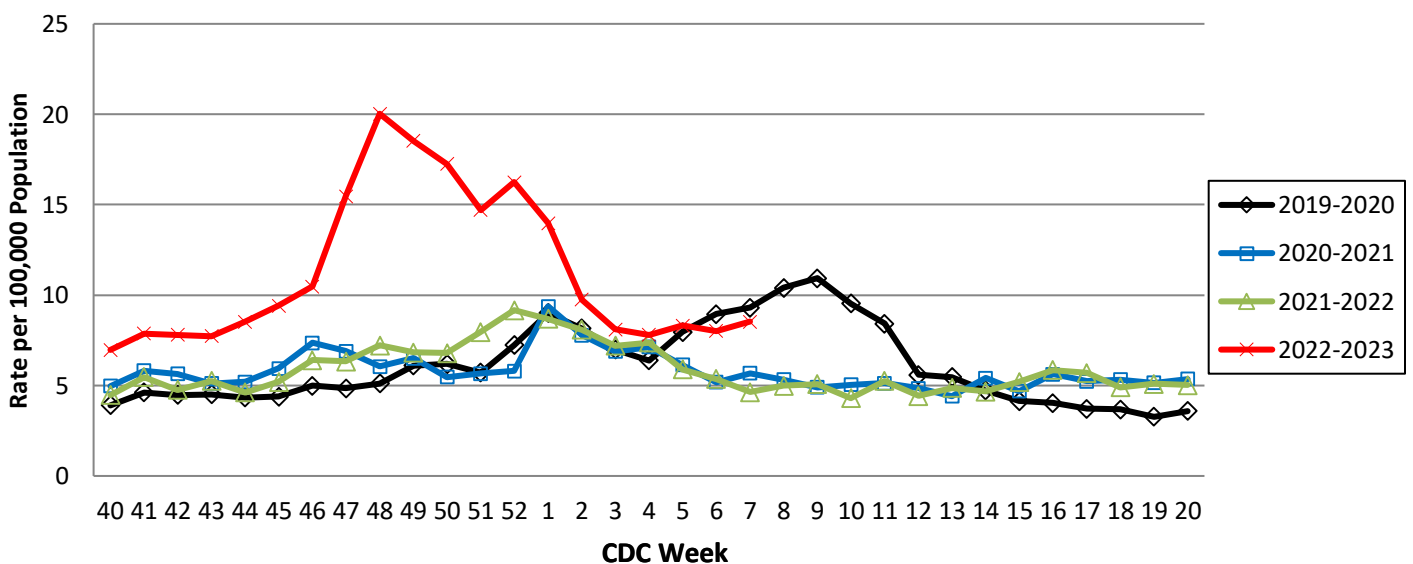

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

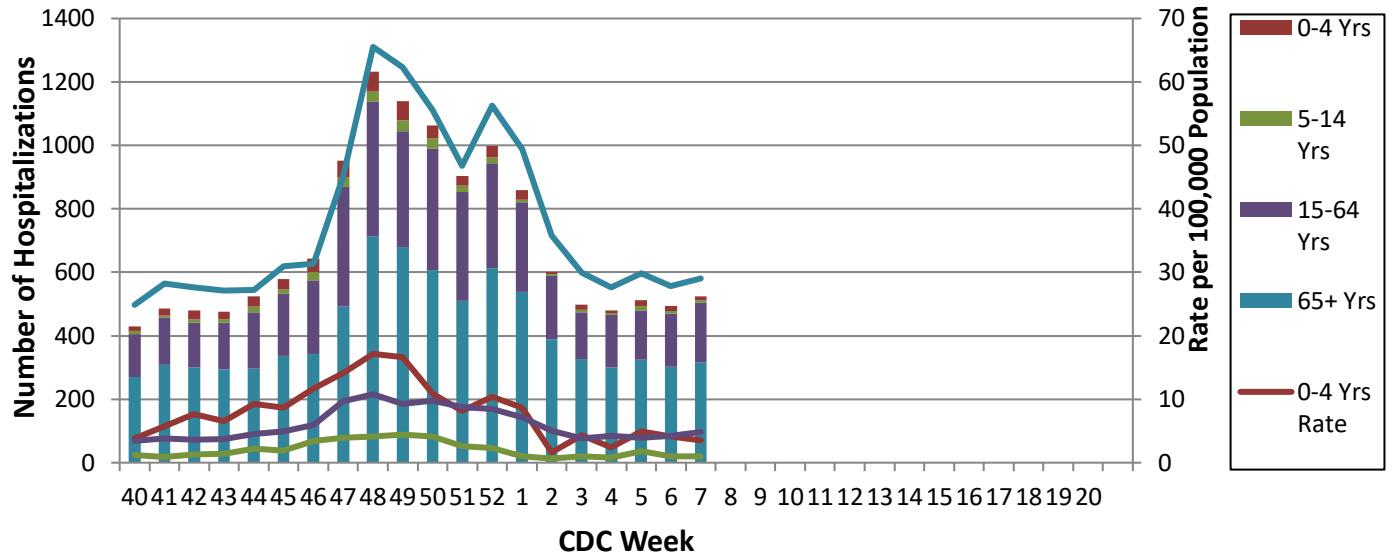**Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season**

Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov. 2022-2023 season-to-date through the week ending February 18, 2023 (Week 7).

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal. Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 7, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 8: February 19, 2023 – February 25, 2023

All data are preliminary and may change as more reports are received.

Summary:

- Influenza activity has decreased to Local[2] across Missouri and continues to decline. Overall, Influenza-like illness (ILI) activity remains at Level 3 in the minimum category.[3]

- During Week 8 a total of 342 laboratory-positive[4] influenza cases (154 influenza A, 153 influenza B and 35 untyped) were reported. The influenza type for reported season-to-date cases includes 94.7% influenza A, 4.9% influenza B and 0.5% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 0.55% for Week 8.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE remained at 1.94 % for Week 8 (Figure 6).[5]

- Two hundred twenty five influenza-associated deaths have been reported in Missouri as of Week 6 (week ending February 4, 2023).[6]

- Eleven influenza outbreaks and two influenza-associated school closures have been reported as of Week 8.

- Seasonal influenza activity continues to decline nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Local is defined as: Outbreaks of influenza or increase in ILI cases and recent laboratory-confirmed influenza in a single region of the state...

[3]ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 8**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 8**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 06-08 (February 5, 2023 – February 25, 2023)[*]

Influenza Type	Week 6	Week 7	Week 8	2022-2023[*] Season-to-Date
Influenza A	233	196	154	100,146
Influenza B	142	153	153	5,140
Influenza Unknown Or Untyped	19	9	35	478
Total	394	358	342	105,764

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 8 (February 19, 2023 – February 25, 2023)[*‡]

Age Group	Week 8 Cases	Week 8 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	36	9.78	15,644	4,250.16
05-24	103	6.59	44,574	2,849.98
25-49	99	5.09	22,500	1,157.95
50-64	55	4.58	11,660	971.50
65+	49	4.61	11,385	1,072.00
Total	342	5.57	105,764	1,723.26

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 8 (February 19, 2023 – February 25, 2023)[*‡]
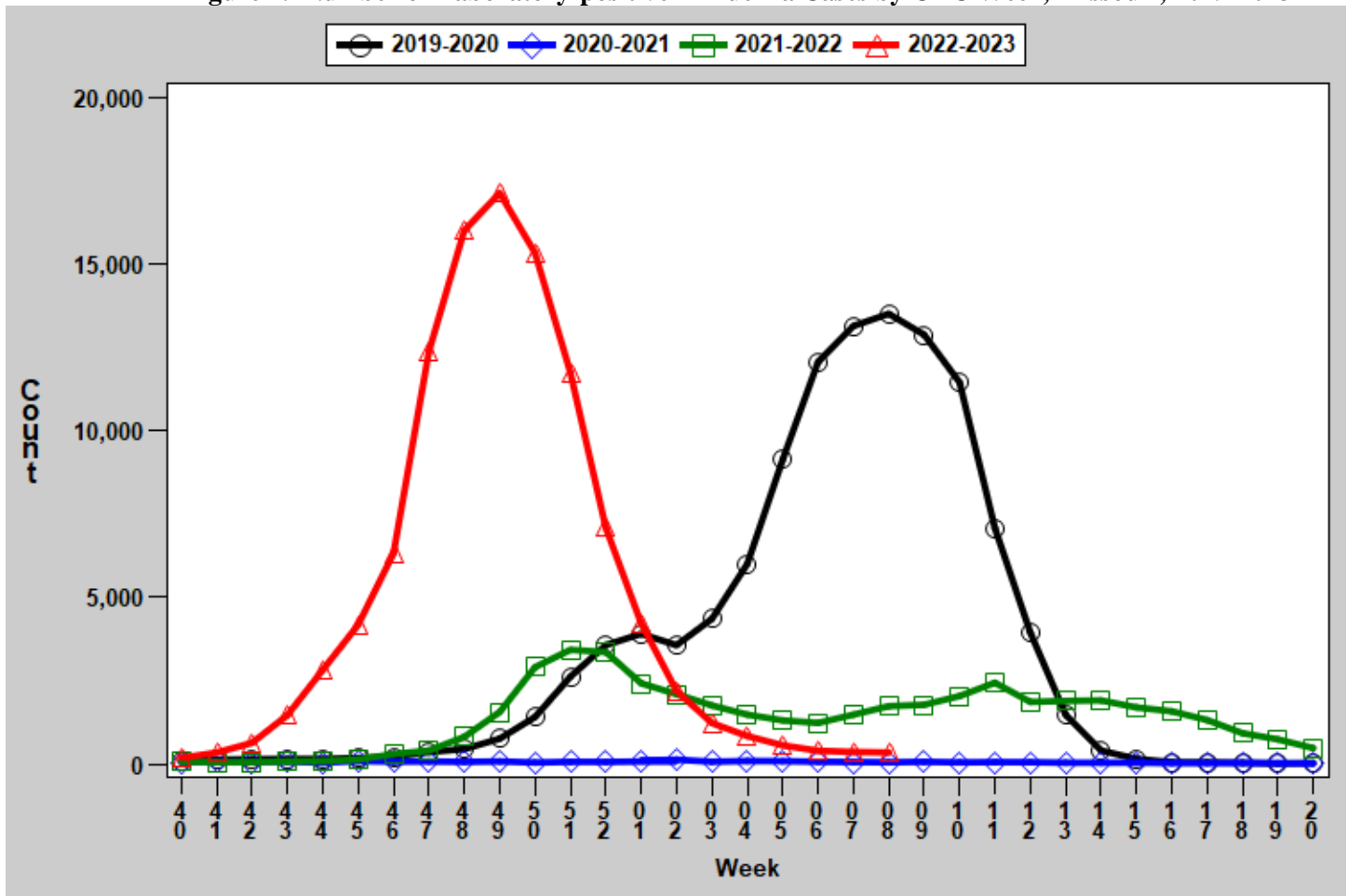
Region	Week 8 Cases	Week 8 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	38	5.67	10,853	1,599.54
Eastern	106	4.67	29,362	1,294.74
Northwest	99	6.05	30,541	1,865.97
Southeast	27	6.24	12,273	2,838.09
Southwest	72	6.85	22,735	2,163.94
Total	342	5.57	105,764	1,723.26

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
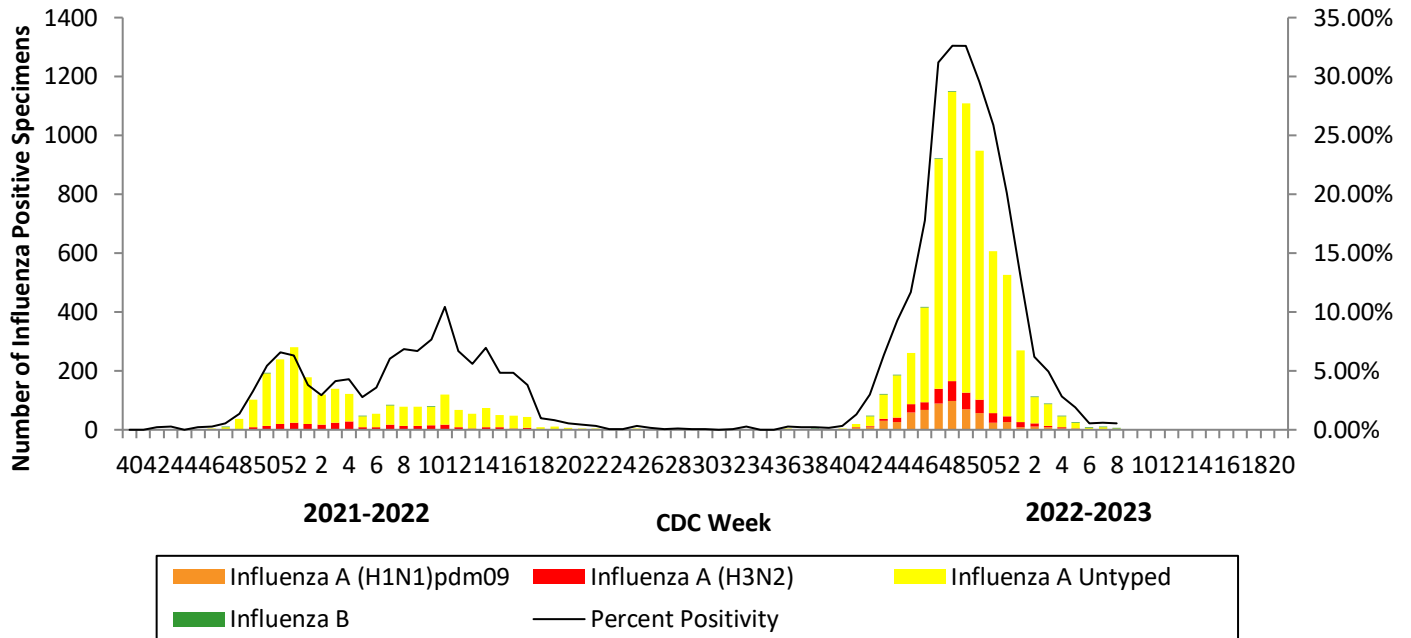[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

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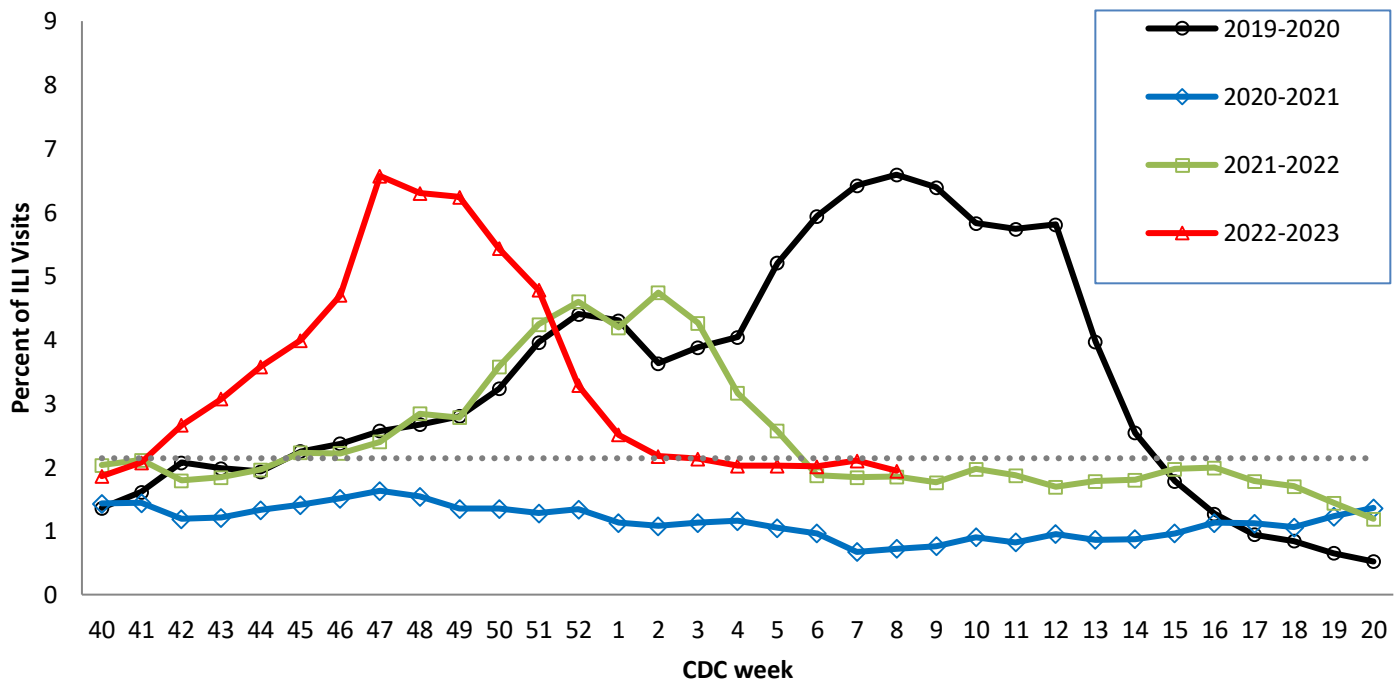[*]2022-2023 season-to-date through the week ending February 25, 2023 (Week 8). .Data Source: Missouri Health Information Surveillance System (WebSurv)

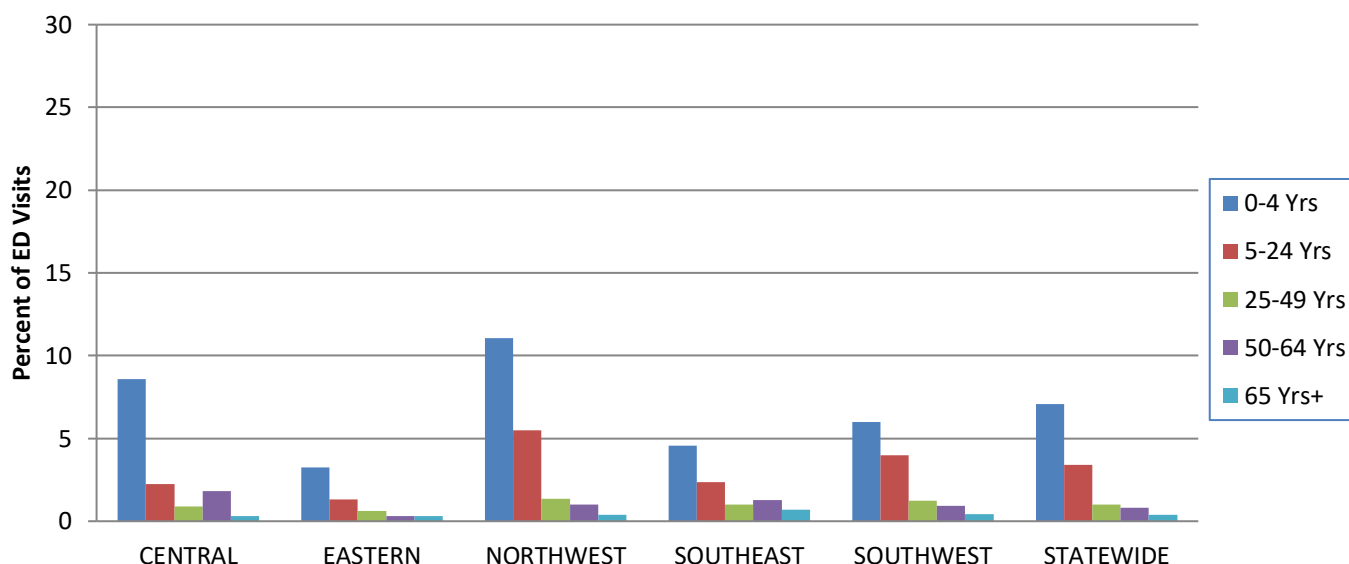**Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri**

Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC). 2022-2023 season-to-date through the week ending February 25, 2023 (Week 8).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
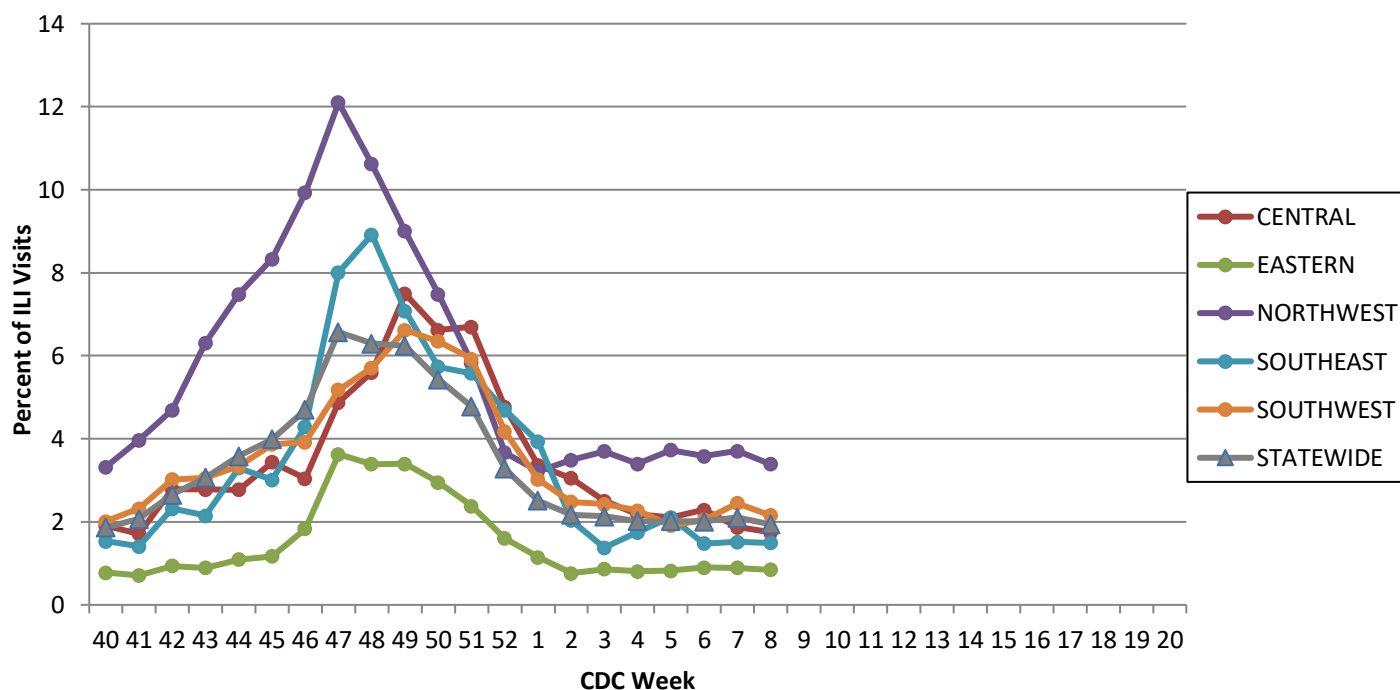
Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 8, 2023[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.
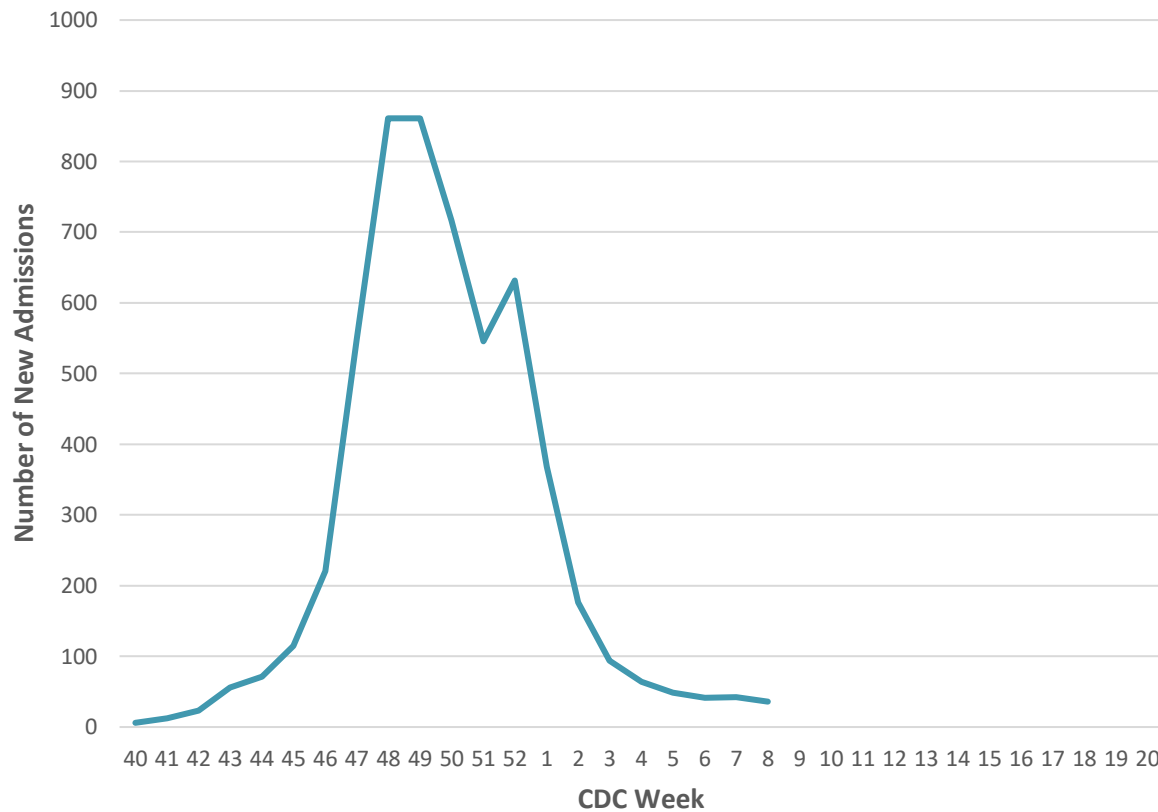
Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
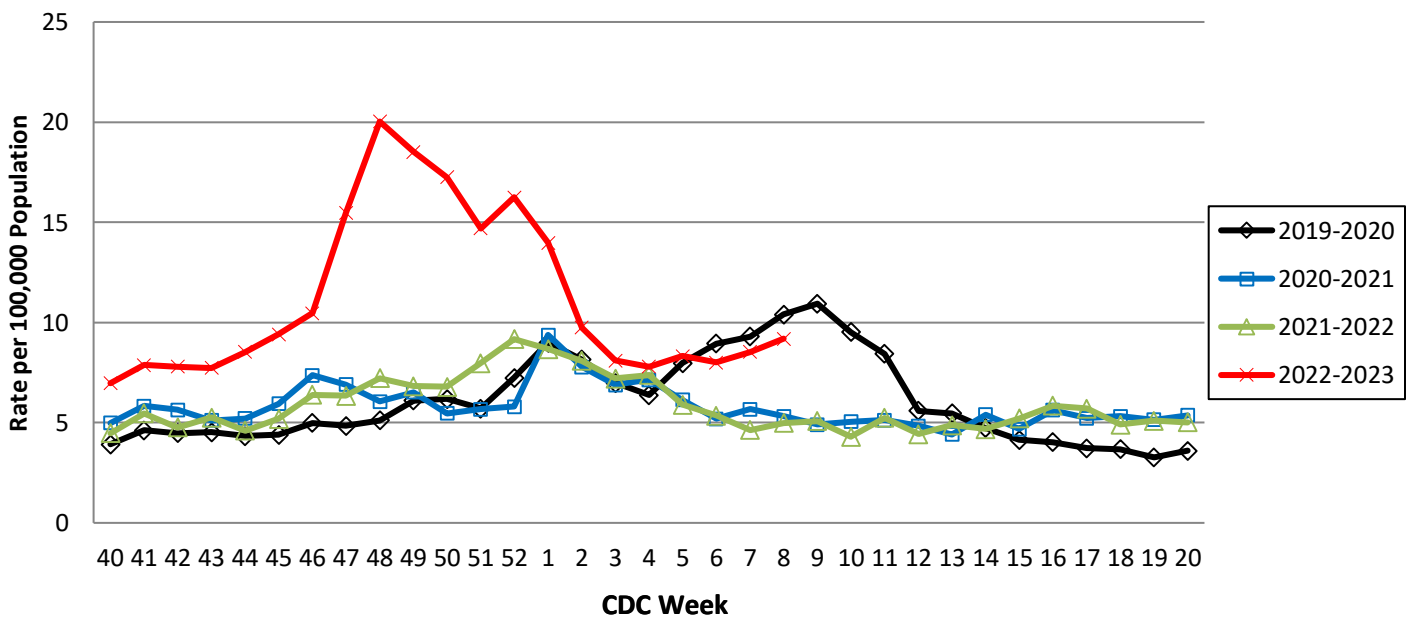[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

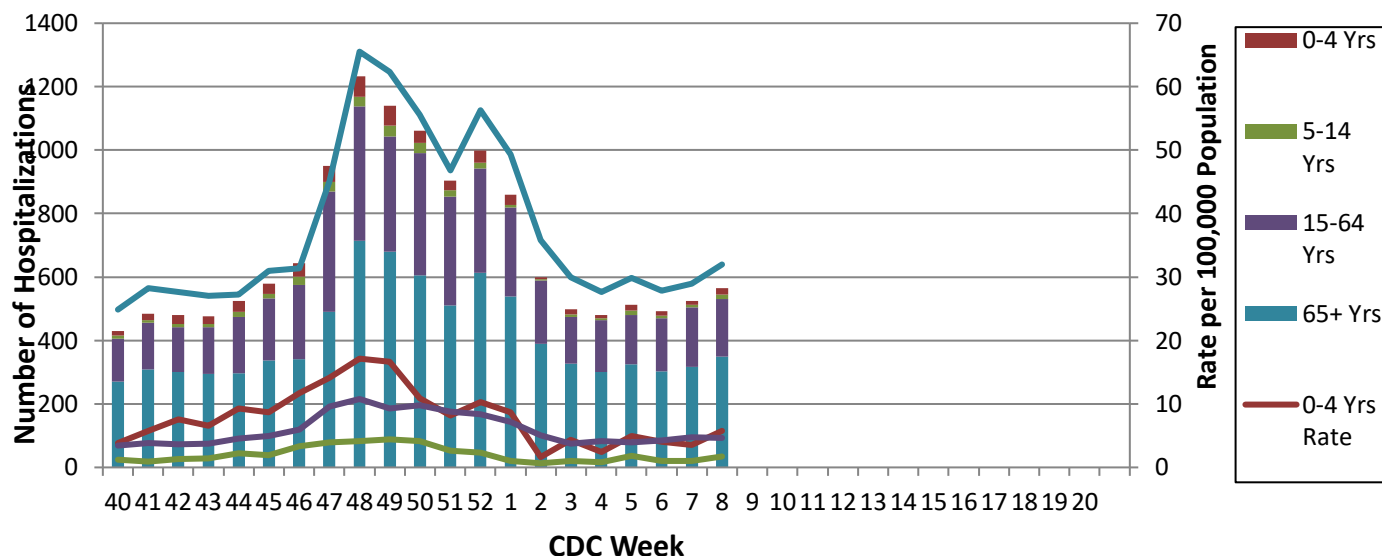**Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season**

Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov. 2022-2023 season-to-date through the week ending February 25, 2023 (Week 8).

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal. Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 8, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 9: February 26, 2023 – March 4, 2023

All data are preliminary and may change as more reports are received.

Summary:

- Seasonal influenza activity in Missouri has remained Local[2], while Influenza-like illness (ILI) activity increased to Level 4 in the low category.[3]

- During Week 9 a total of 230 laboratory-positive[4] influenza cases (126 influenza A, 104 influenza B and 0 untyped) were reported. The influenza type for reported season-to-date cases includes 94.6% influenza A, 5.0% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 0.07% for Week 9.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE remained at 2.14 % for Week 9 (Figure 6).[5]

- Two hundred thirty influenza-associated deaths have been reported in Missouri as of Week 7 (week ending February 4, 2023).[6]

- Eleven influenza outbreaks and two influenza-associated school closures have been reported as of Week 9.

- Seasonal influenza activity continues to decline nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Local is defined as: Outbreaks of influenza or increase in ILI cases and recent laboratory-confirmed influenza in a single region of the state...

[3]ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at
https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 9**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 9**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

**Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type,
Missouri, CDC Weeks 07-09 (February 12, 2023 – March 4, 2023)[*]**

Influenza Type	Week 7	Week 8	Week 9	2022-2023[*] Season-to-Date
Influenza A	203	166	126	100,530
Influenza B	164	170	104	5,294
Influenza Unknown Or Untyped	9	35	0	478
Total	376	370	230	106,302

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain
reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

**Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group,
Missouri, CDC Week 9 (February 26, 2023 – March 4, 2023)[*‡]**

Age Group	Week 8 Cases	Week 8 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	25	6.79	15,715	4,269.45
05-24	79	5.05	44,792	2,863.92
25-49	54	2.78	22,609	1,163.56
50-64	35	2.92	11,728	977.16
65+	37	3.48	11,457	1,078.78
Total	230	3.75	106,302	1,732.03

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain
reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 9 (February 25, 2023 – March 4, 2023)[*‡]
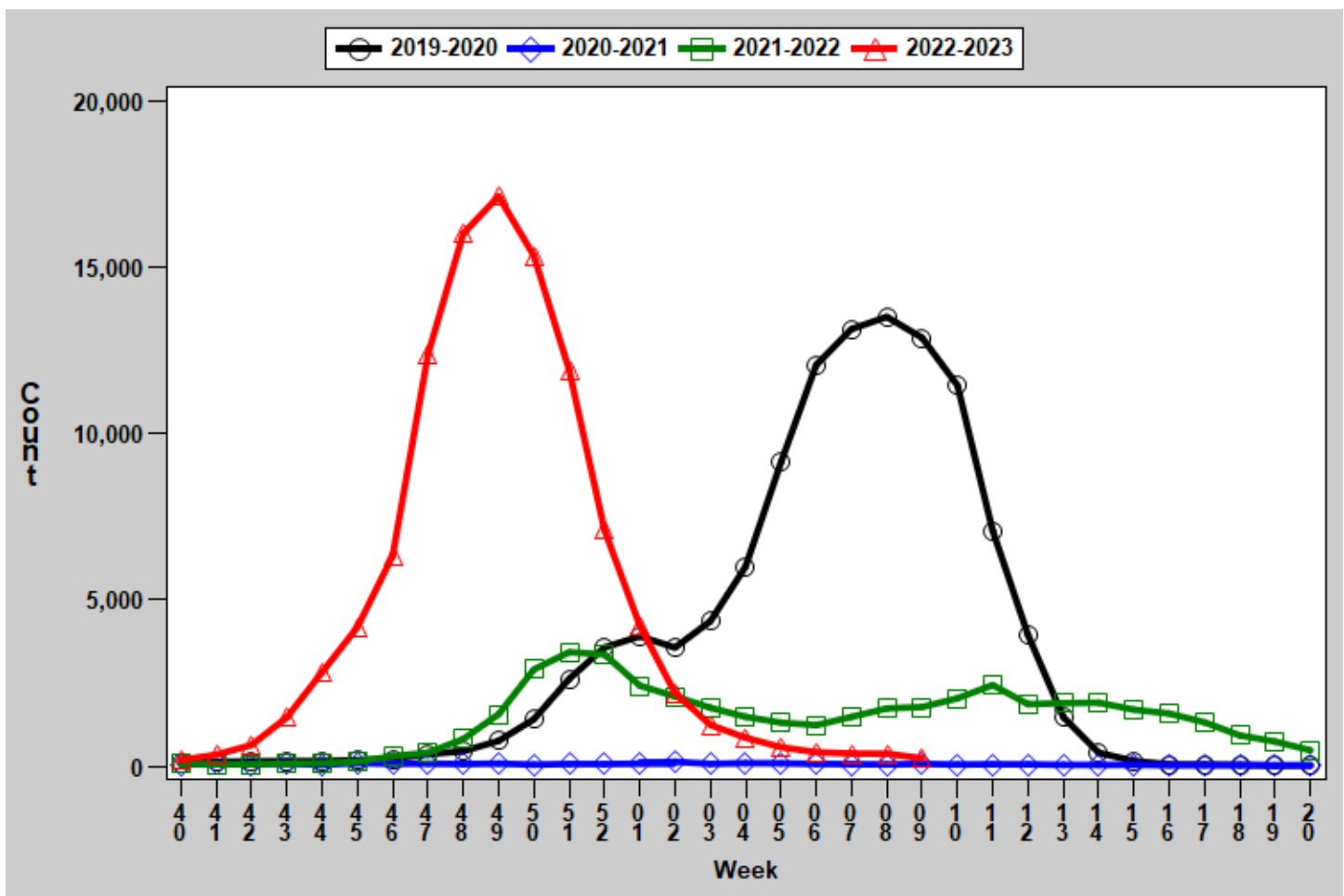
Region	Week 8 Cases	Week 8 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	45	6.67	10,938	1,620.88
Eastern	67	2.95	29,640	1,307.00
Northwest	27	1.65	30,586	1,868.72
Southeast	17	3.93	12,302	2,844.80
Southwest	74	7.04	22,836	2,173.55
Total	230	3.75	106,302	1,732.03

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)

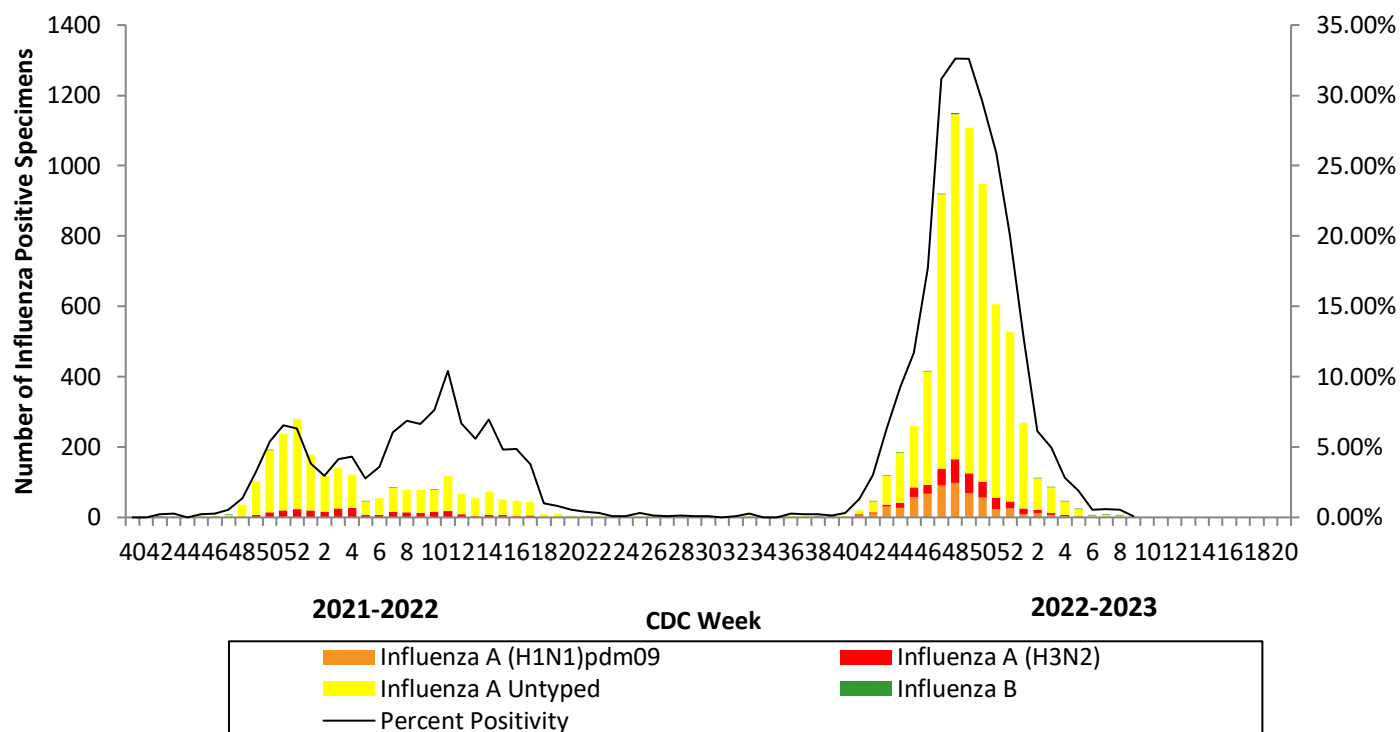[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
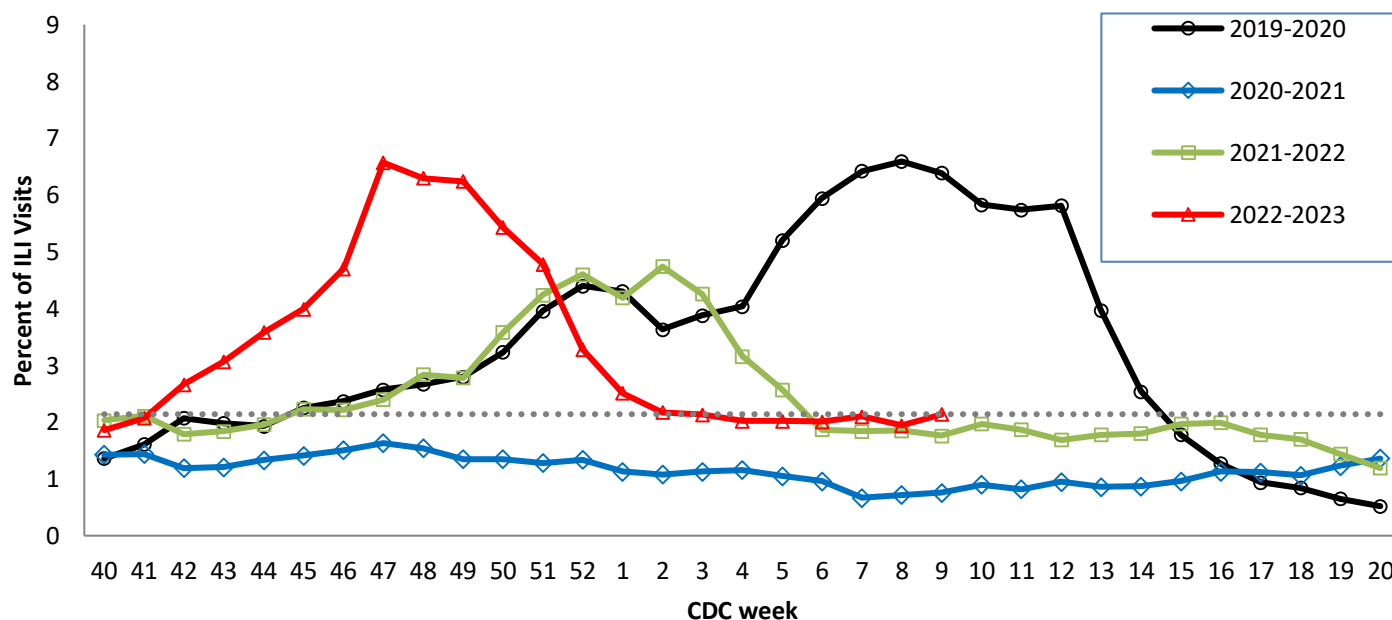[*]2022-2023 season-to-date through the week ending February 25, 2023 (Week 8). .Data Source: Missouri Health Information Surveillance System (WebSurv)

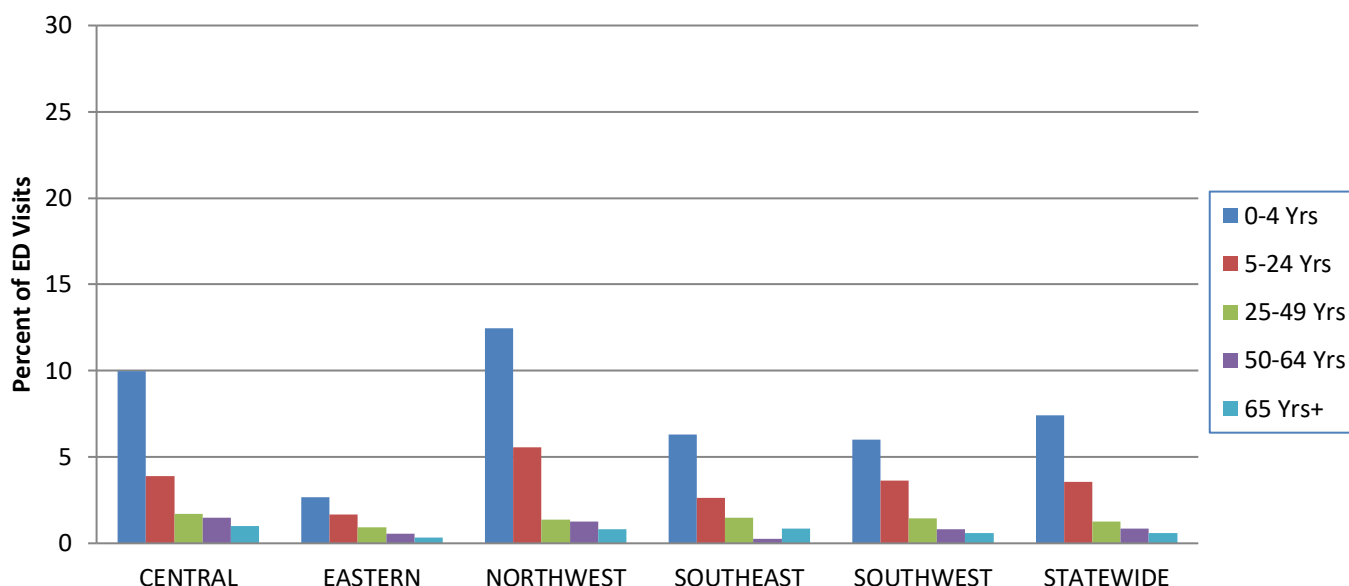# Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri

Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
2022-2023 season-to-date through the week ending March 4, 2023 (Week 9).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]
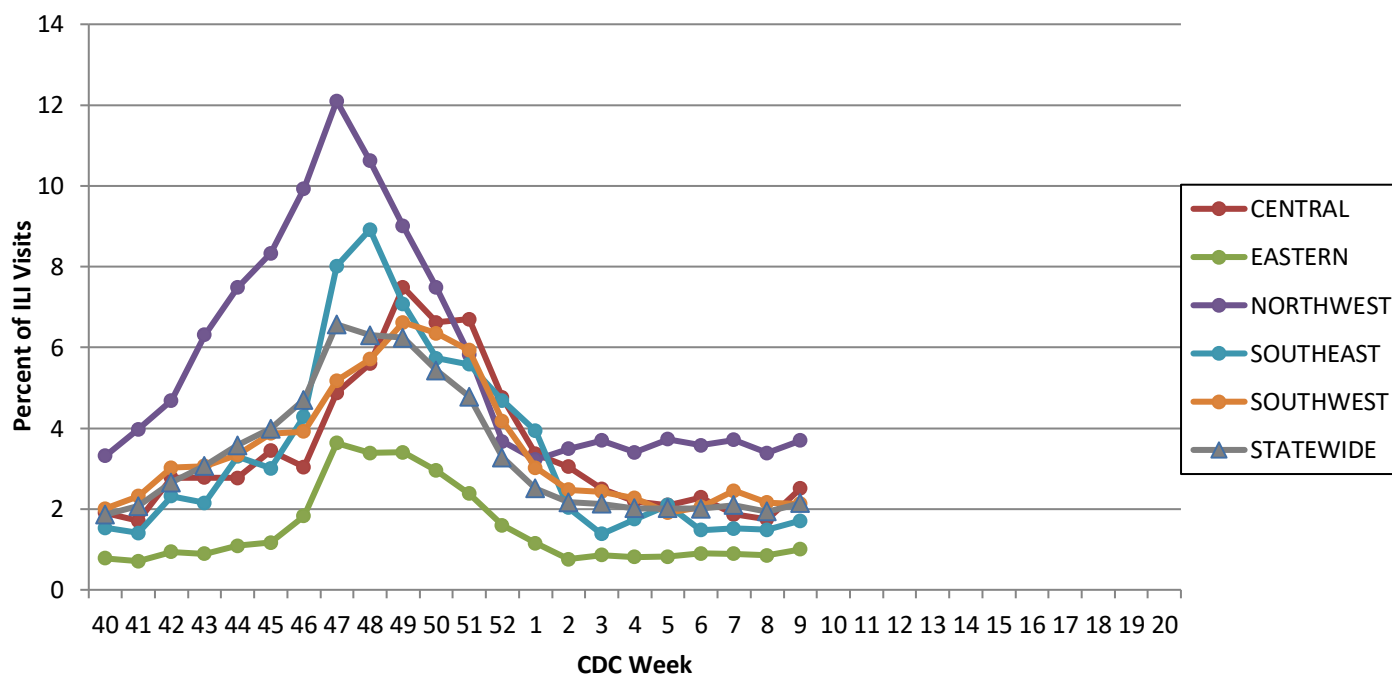

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7.   Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 9, 2023[*]
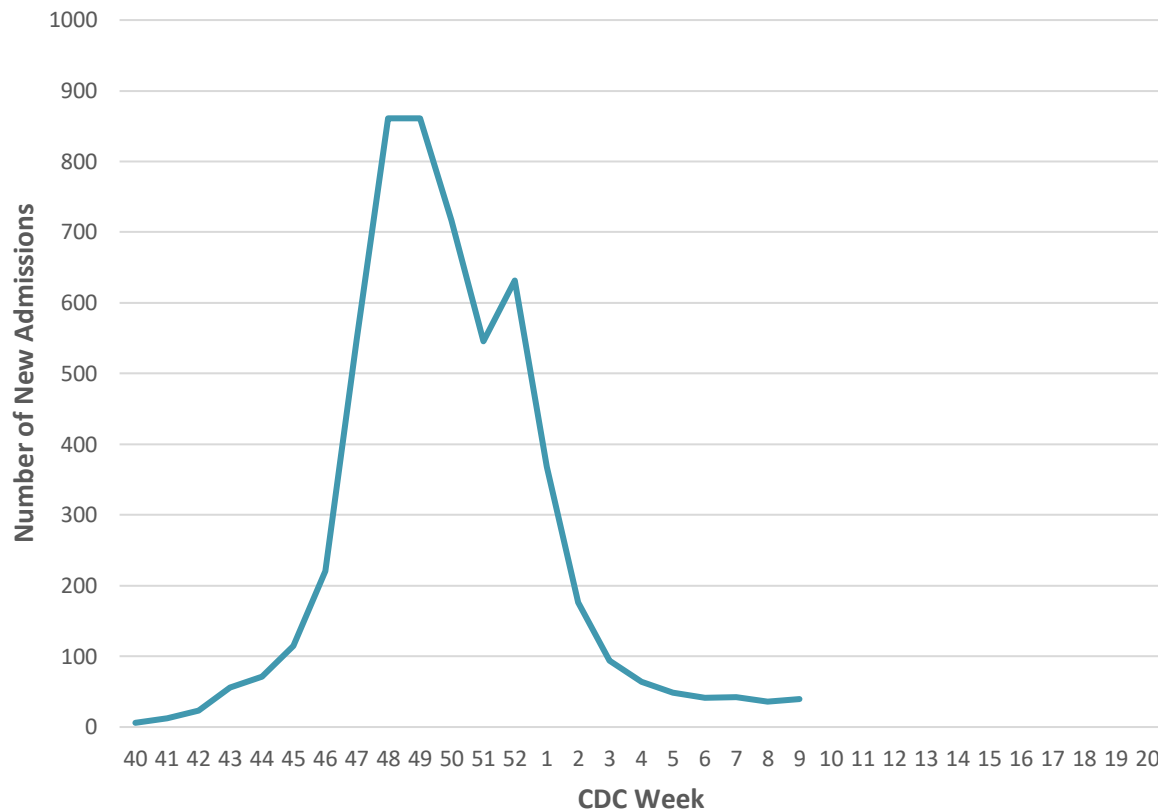

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]
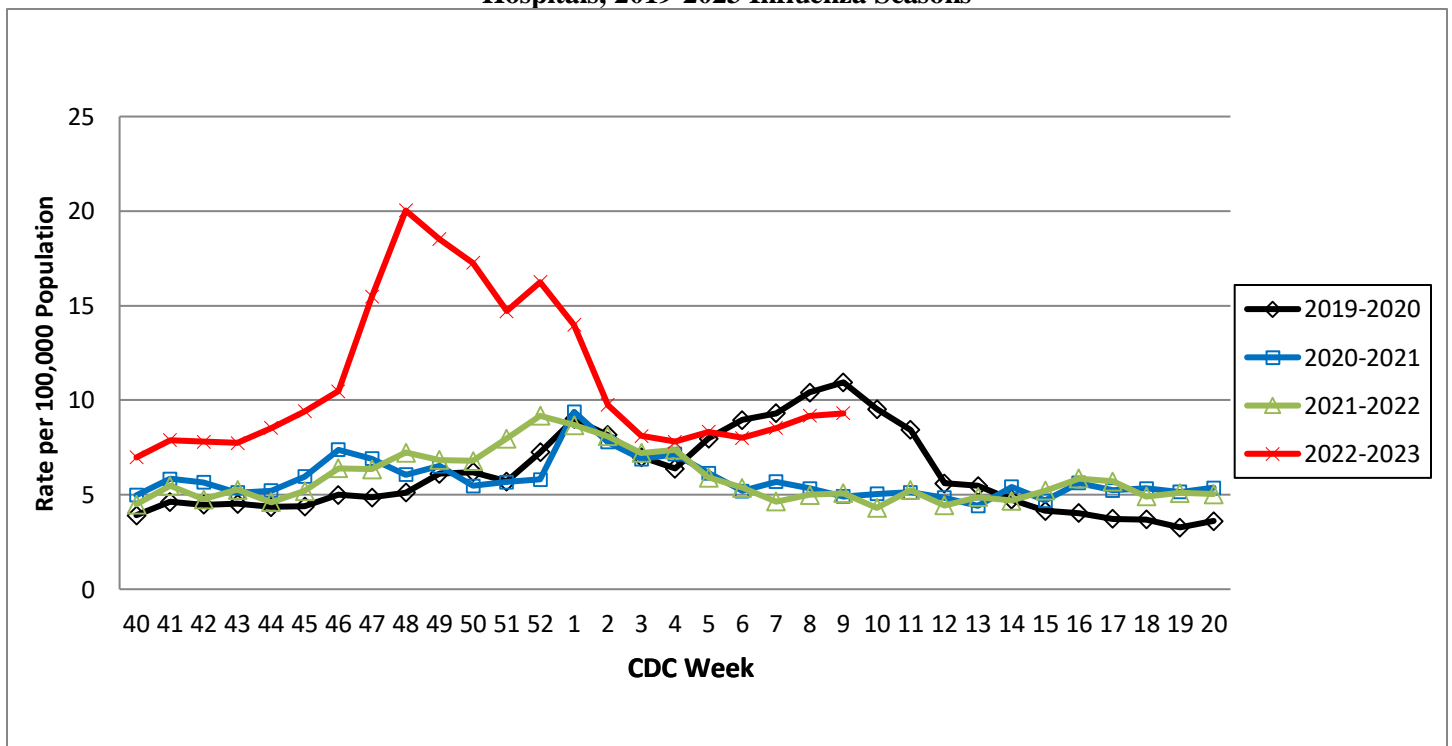

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

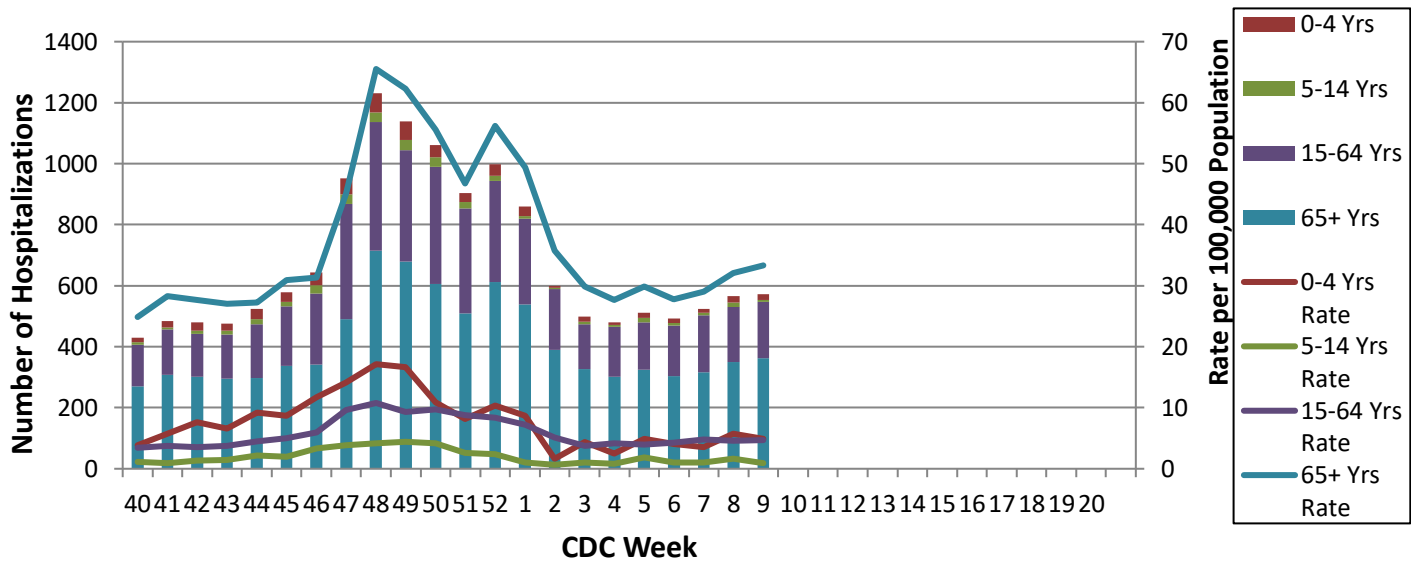**Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season**

Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov.
2022-2023 season-to-date through the week ending February 25, 2023 (Week 8).

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal.
Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 8, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 10: March 5, 2023 – March 11, 2023

All data are preliminary and may change as more reports are received.

Summary:

- Seasonal influenza activity and the Influenza-like illness (ILI) activity in Missouri remained Local[2] and Level 4 in the low category[3], respectively during Week 10.

- During Week 10 a total of 211 laboratory-positive[4] influenza cases (101 influenza A, 110 influenza B and 0 untyped) were reported. The influenza type for reported season-to-date cases includes 94.4% influenza A, 5.1% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 0.84% for Week 10.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE remained at 2.03% for Week 10 (Figure 6).[5]

- Two hundred thirty one influenza-associated deaths have been reported in Missouri as of Week 8 (week ending February 25, 2023).[6]

- Eleven influenza outbreaks and two influenza-associated school closures have been reported as of Week 10.

- Seasonal influenza activity continues to decline nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Local is defined as: Outbreaks of influenza or increase in ILI cases and recent laboratory-confirmed influenza in a single region of the state...

[3]ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 10**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 10**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 08-10 (February 19, 2023 – March 4, 2023)[*]

Influenza Type	Week 8	Week 9	Week 10	2022-2023[*] Season-to-Date
Influenza A	184	149	101	100,718
Influenza B	177	145	110	5,464
Influenza Unknown Or Untyped	35	0	0	478
Total	396	294	211	106,660

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 10 (March 5, 2023 – March 11, 2023)[*‡]

Age Group	Week 10 Cases	Week 10 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	35	9.51	15,766	4,283.31
05-24	73	4.67	44,921	2,872.17
25-49	39	2.01	22,673	1,166.85
50-64	33	2.75	11,785	981.91
65+	31	2.92	11,514	1,084.14
Total	211	3.44	106,660	1,731.86

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 10 (March 5, 2023 – March 11, 2023)[*‡]
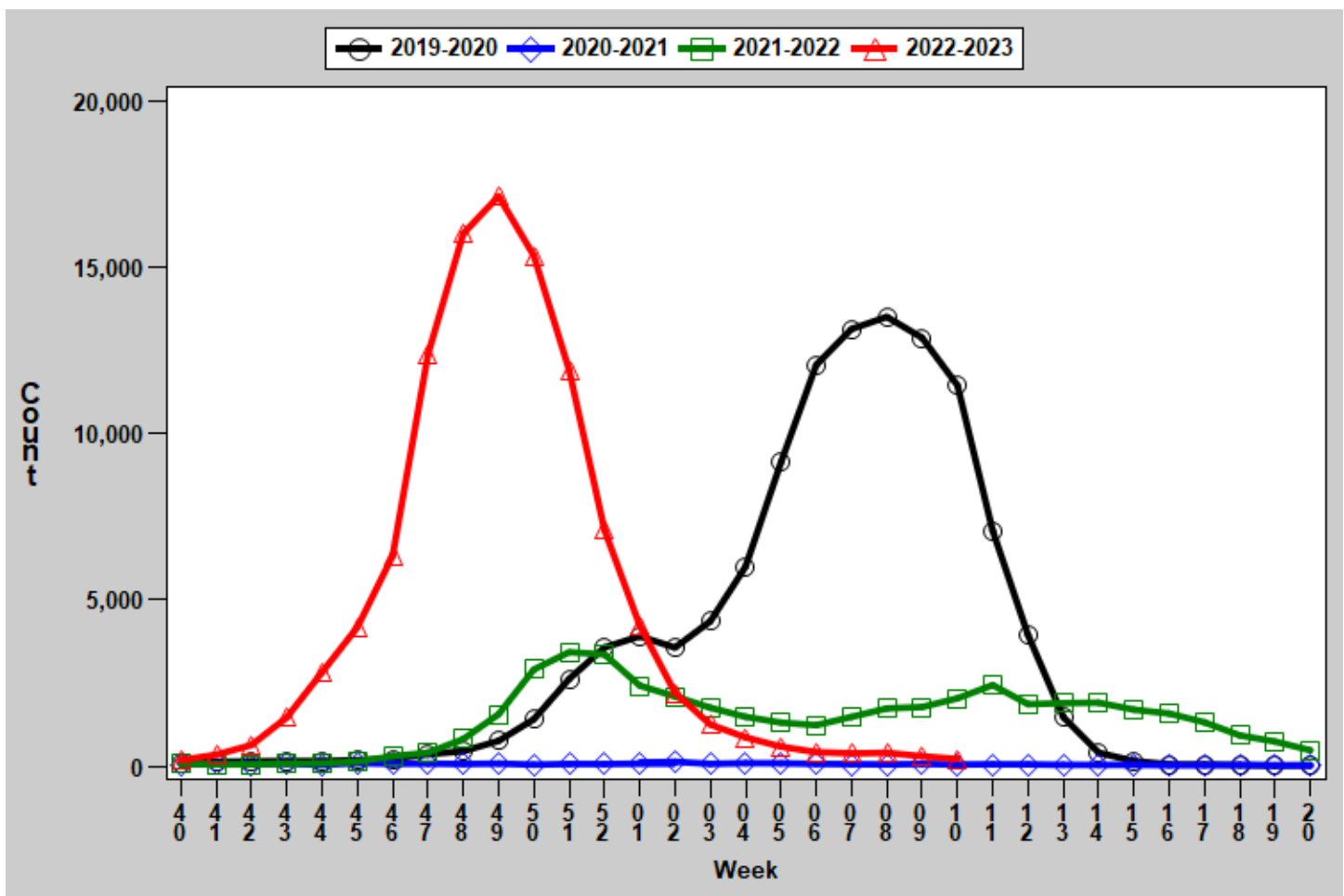
Region	Week 10 Cases	Week 10 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	33	4.89	10,992	1,628.88
Eastern	77	3.40	29,724	1,310.70
Northwest	27	1.65	30,652	1,872.75
Southeast	16	3.70	12,326	2,850.35
Southwest	58	5.52	22,966	2,185.92
Total	211	3.44	106,660	1,737.86

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)

[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
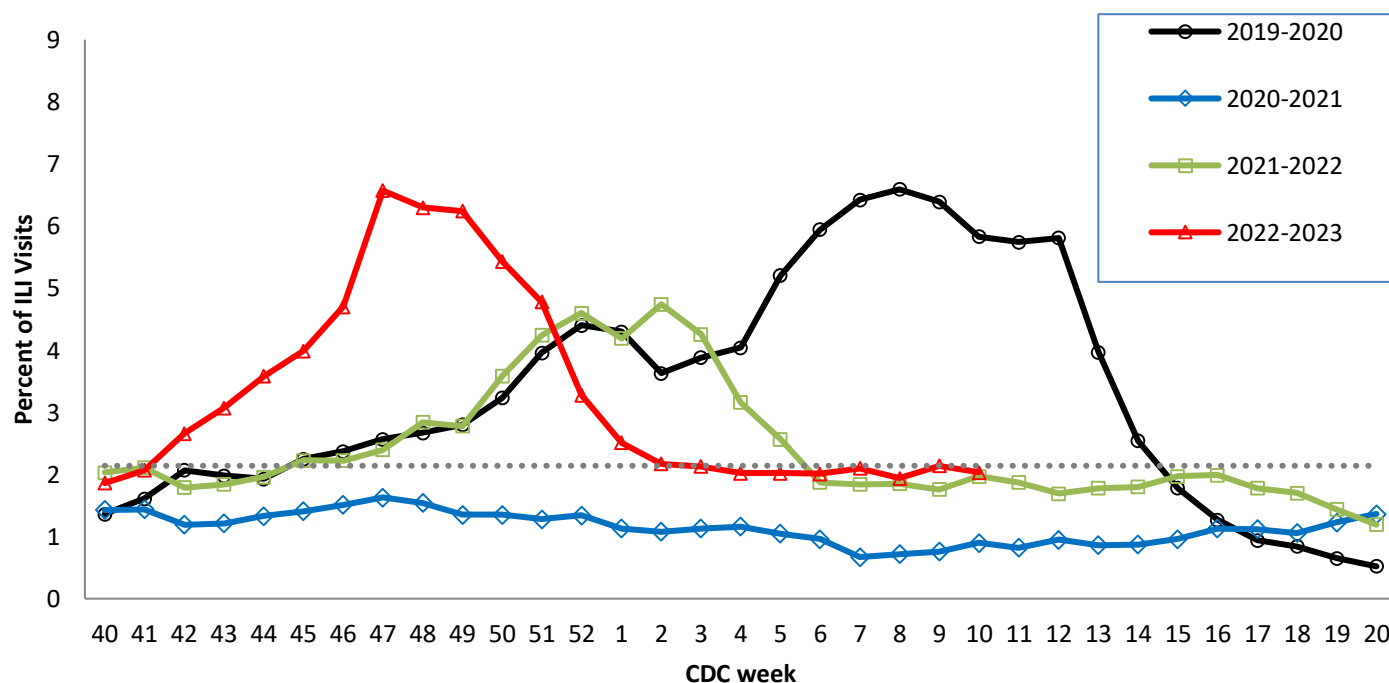[*]2022-2023 season-to-date through the week ending March 11, 2023 (Week 10). .Data Source: Missouri Health Information Surveillance System (WebSurv)

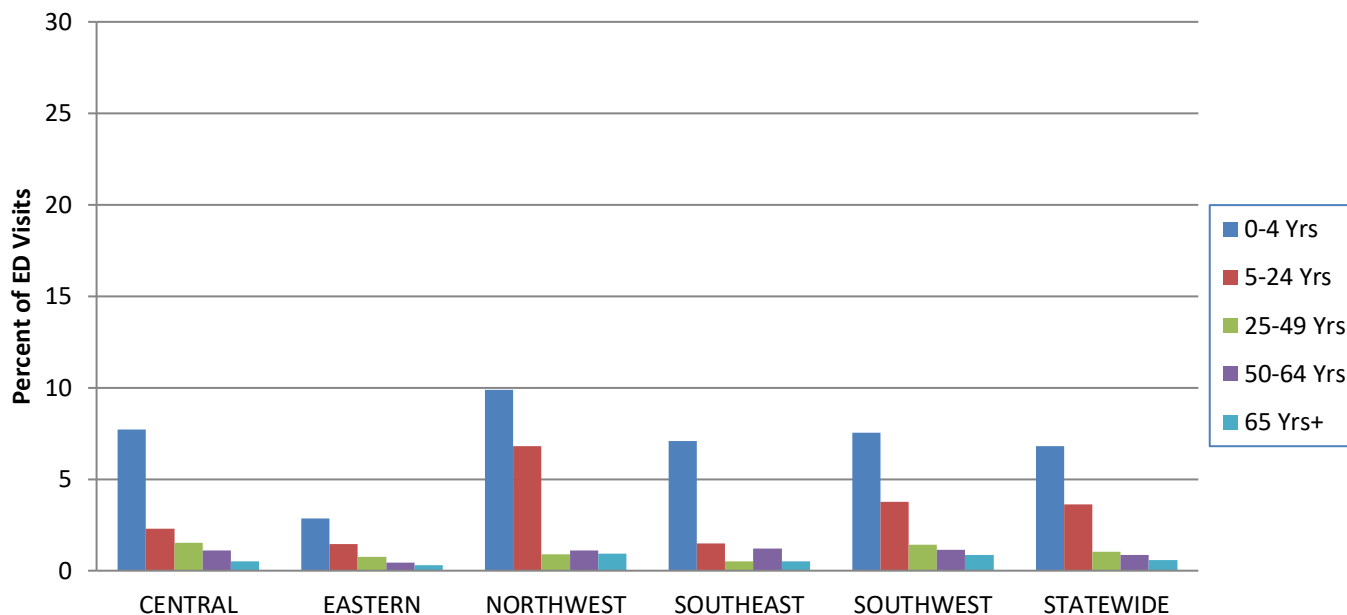**Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri**
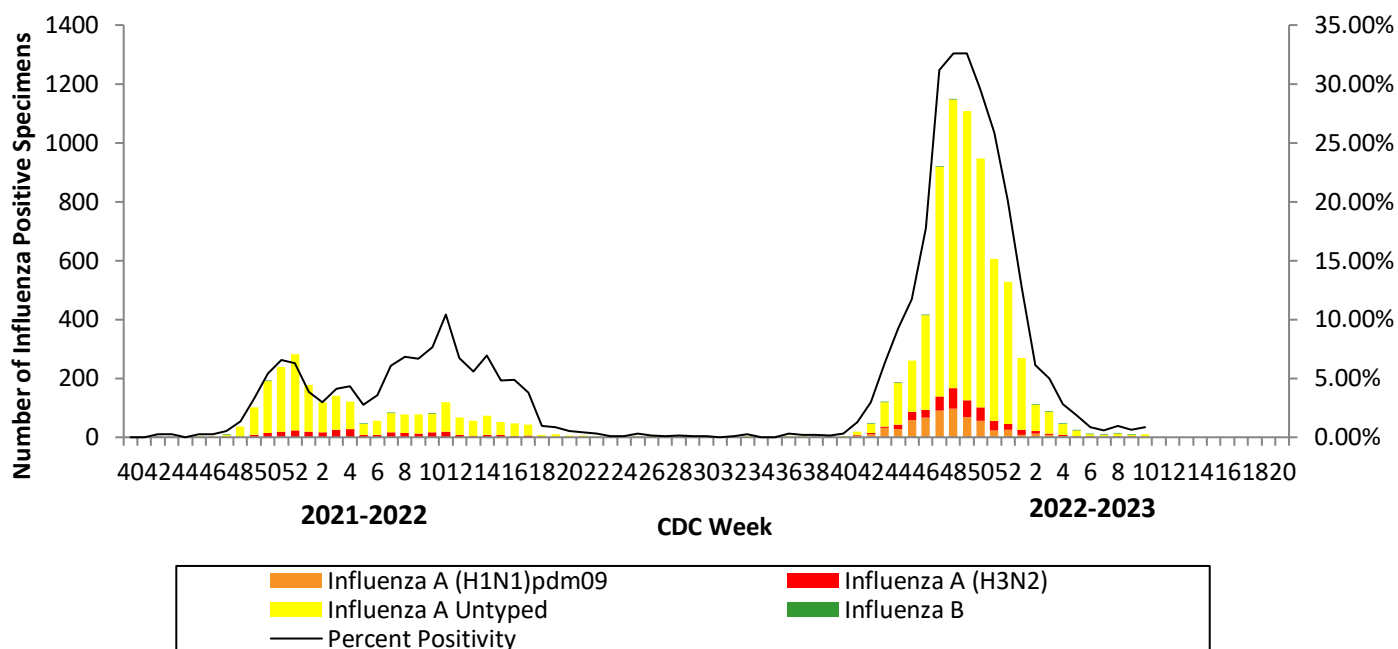
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC). 2022-2023 season-to-date through the week ending March 11, 2023 (Week 10).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]
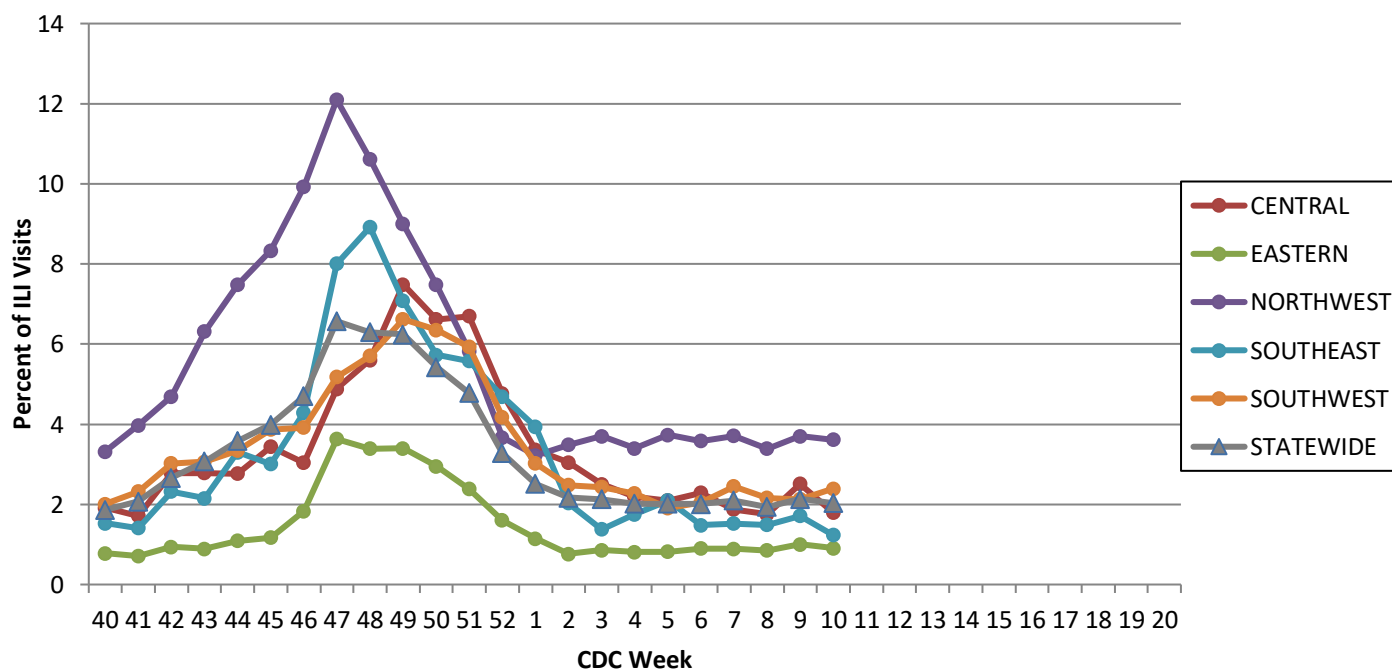

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7.   Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 10, 2023[*]
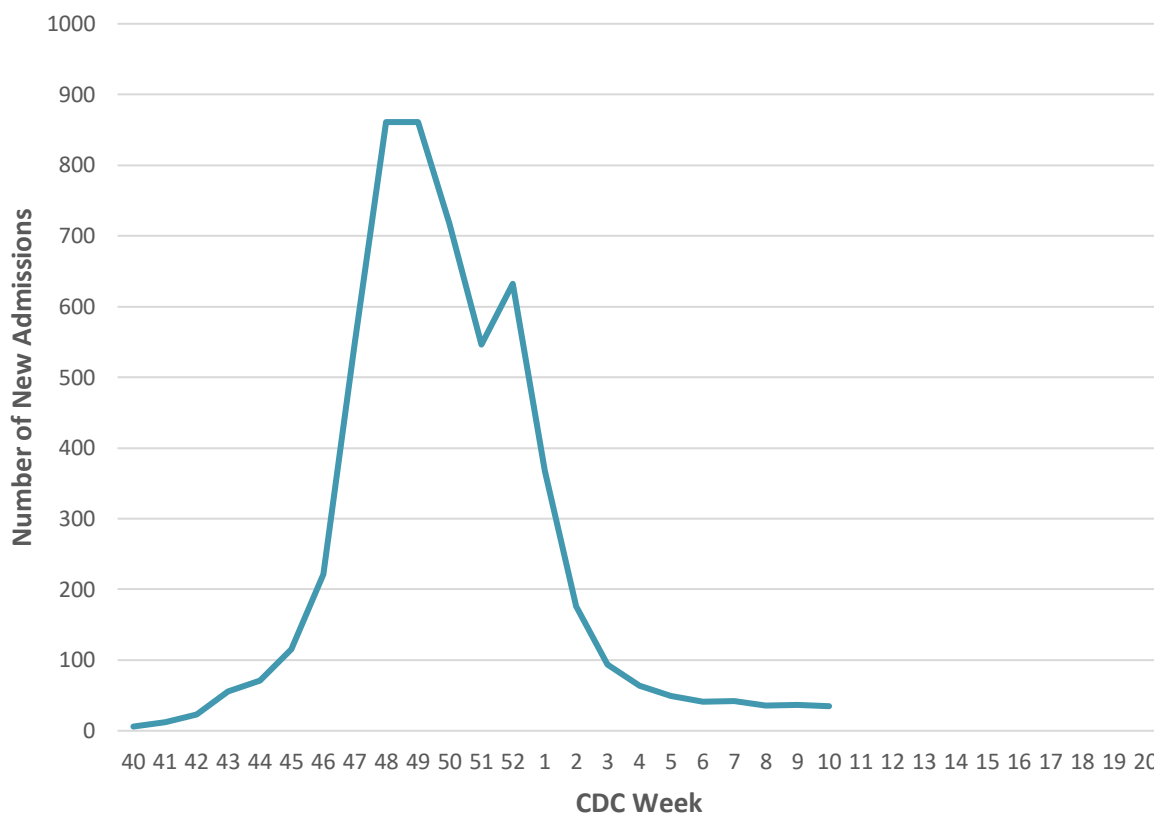

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]
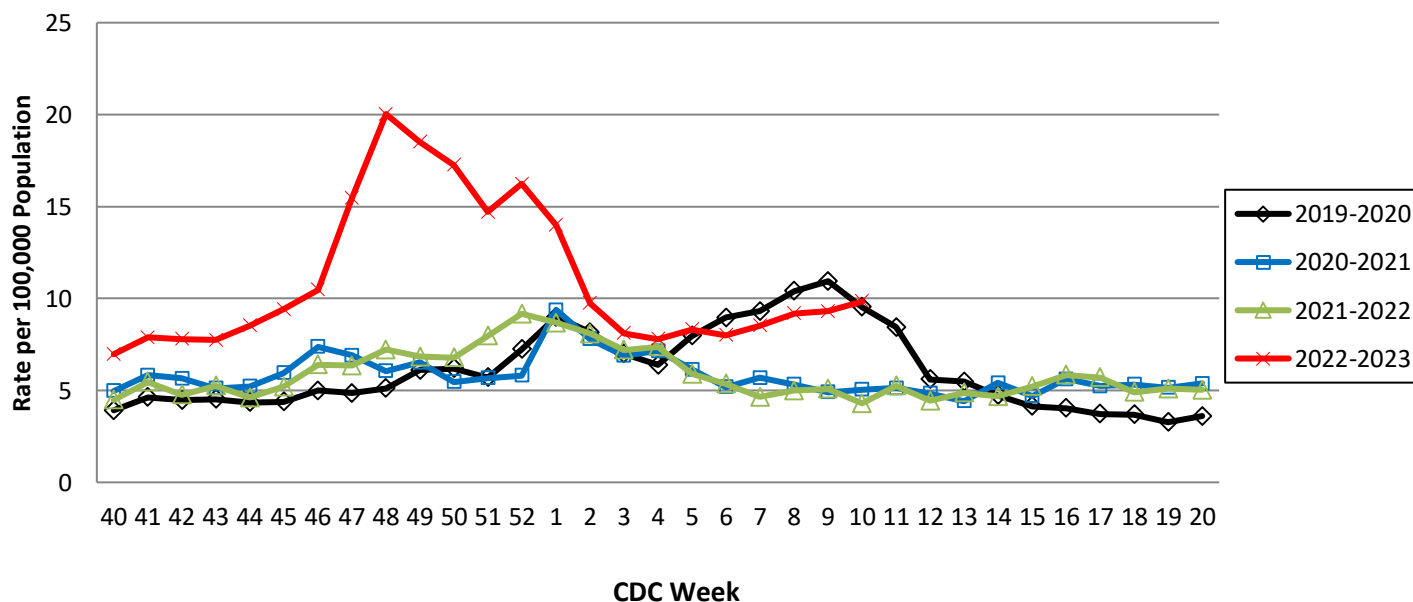

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

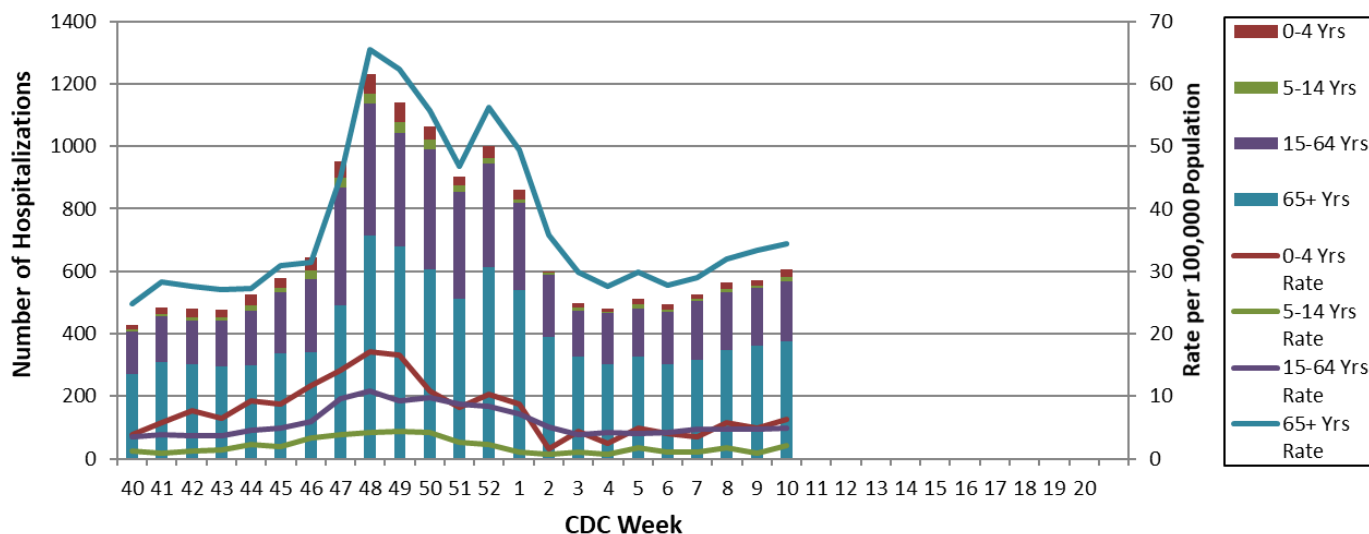**Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season**

Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov.
2022-2023 season-to-date through the week ending March 11, 2023 (Week 10).

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal.
Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 10, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 11: March 12, 2023 – March 18, 2023

All data are preliminary and may change as more reports are received.

Summary:

- Seasonal influenza activity and the Influenza-like illness (ILI) activity in Missouri remained Local[2] and decreased to Level 3 in the minimal category[3], respectively during Week 11.

- During Week 11 a total of 132 laboratory-positive[4] influenza cases (65 influenza A, 67 influenza B and 0 untyped) were reported. The influenza type for reported season-to-date cases includes 94.4% influenza A, 5.2% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 0.28% for Week 11.The number of Missouri facilities reporting to NREVSS for Week 11 was limited at the time of this report.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE decreased to 1.93% for Week 11 (Figure 6).[5]

- Two hundred thirty two influenza-associated deaths have been reported in Missouri as of Week 9 (week ending March 4, 2023).[6]

- Eleven influenza outbreaks and two influenza-associated school closures have been reported as of Week 11.

- Seasonal influenza activity continues to decline nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Local is defined as: Outbreaks of influenza or increase in ILI cases and recent laboratory-confirmed influenza in a single region of the state...

[3]ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 11**

- **Reported Week-specific Rate per 100,000 Population, CDC Week 11**

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**

- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 09-11 (February 26, 2023 – March 18, 2023)[*]

Influenza Type	Week 9	Week 10	Week 11	2022-2023[*] Season-to-Date
Influenza A	157	116	65	100,807
Influenza B	149	127	67	5,553
Influenza Unknown Or Untyped	0	0	0	478
Total	306	243	132	106,838

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 11 (March 12, 2023 – March 18, 2023)[*‡]

Age Group	Week 10 Cases	Week 10 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	26	7.06	15,797	4,291.73
05-24	42	2.69	44,982	2,876.07
25-49	28	1.44	22,709	1,168.70
50-64	21	1.75	11,809	983.91
65+	15	1.41	11,540	1,086.59
Total	132	2.15	106,838	1,740.76

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 11 (March 12, 2023 – March 18, 2023)[*‡]
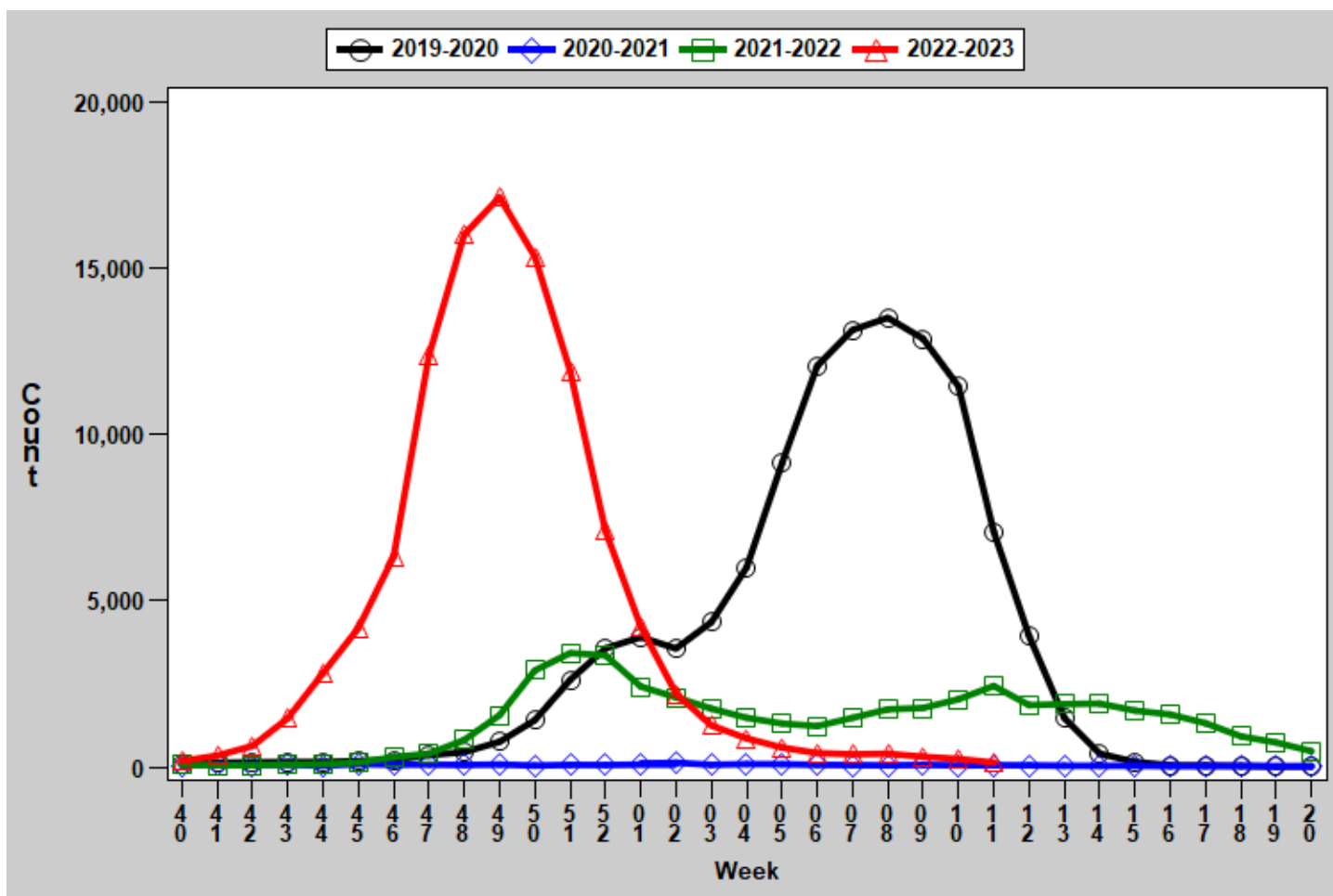
Region	Week 10 Cases	Week 10 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	27	4.00	11,032	1,634.81
Eastern	39	1.72	29,764	1,312.47
Northwest	14	0.86	30,675	1,874.15
Southeast	23	5.32	12,362	2,858.68
Southwest	29	2.76	23,005	2,189.64
Total	132	2.15	106,838	1,740.76

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
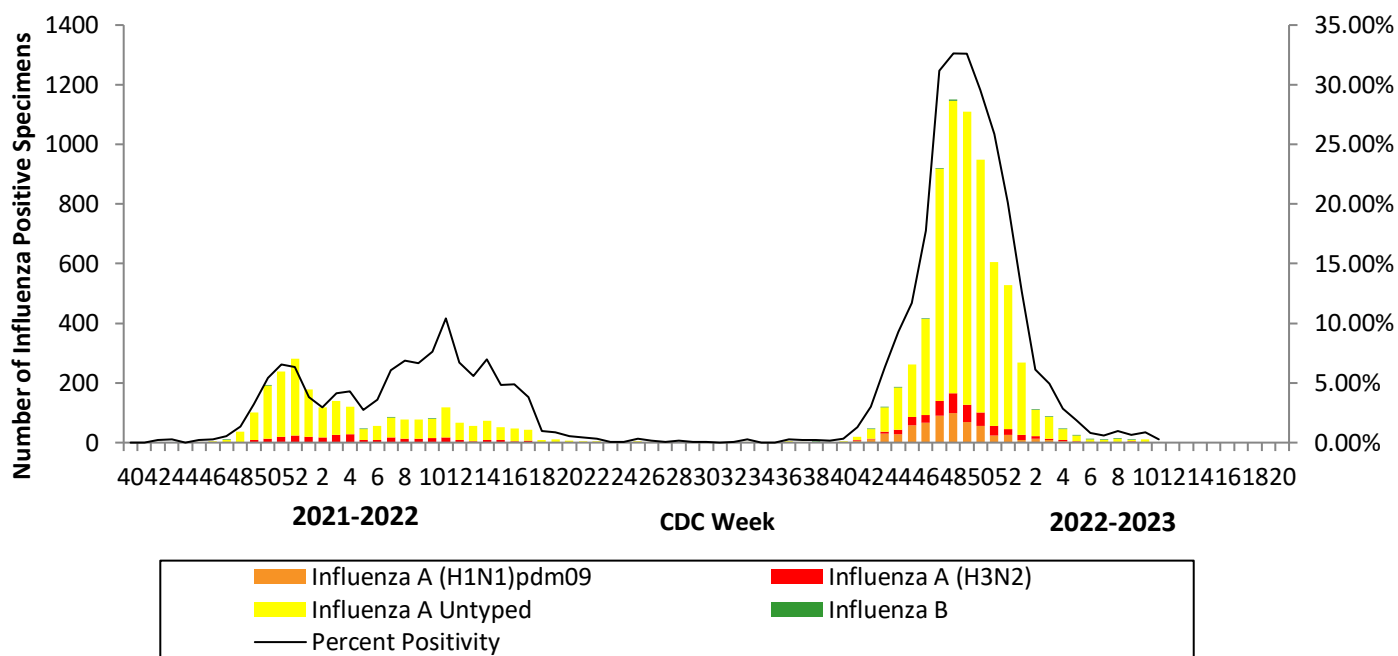[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
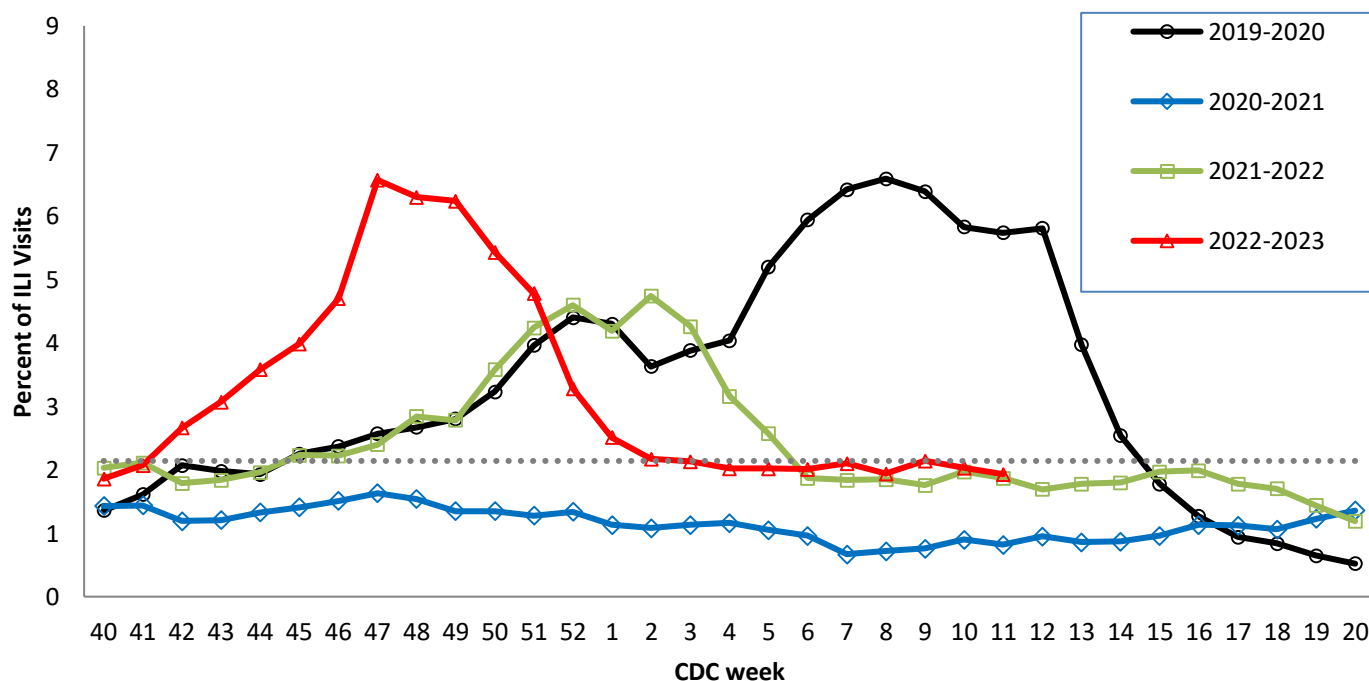[*]2022-2023 season-to-date through the week ending March 18, 2023 (Week 11). .Data Source: Missouri Health Information Surveillance System (WebSurv)

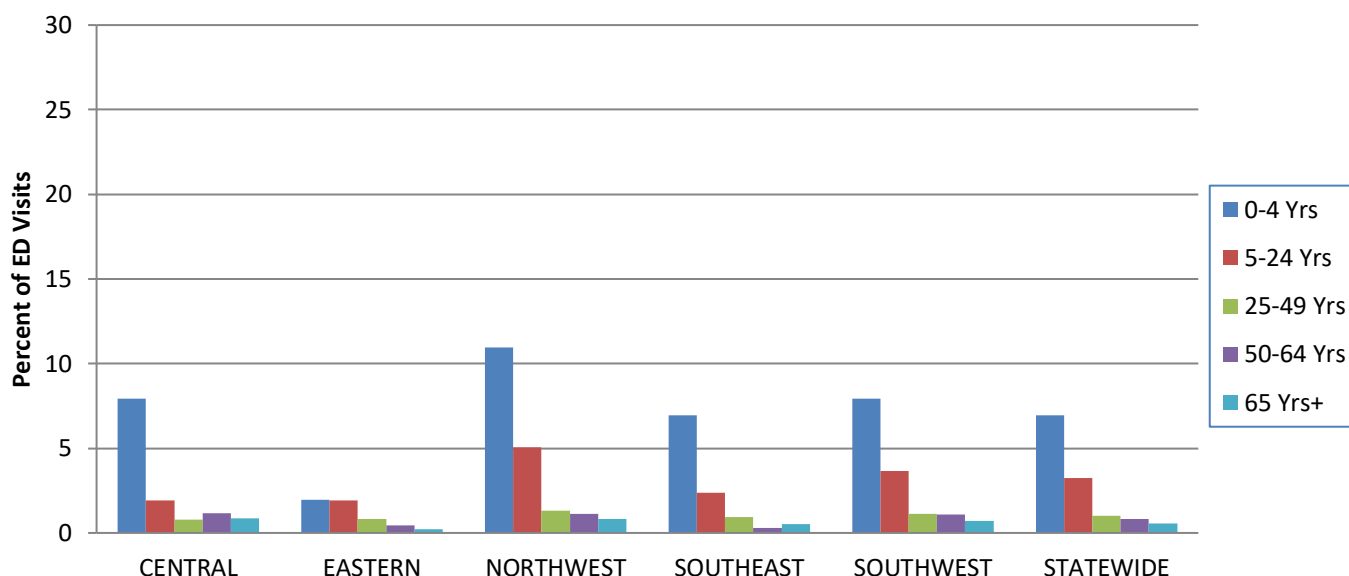**Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri**

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
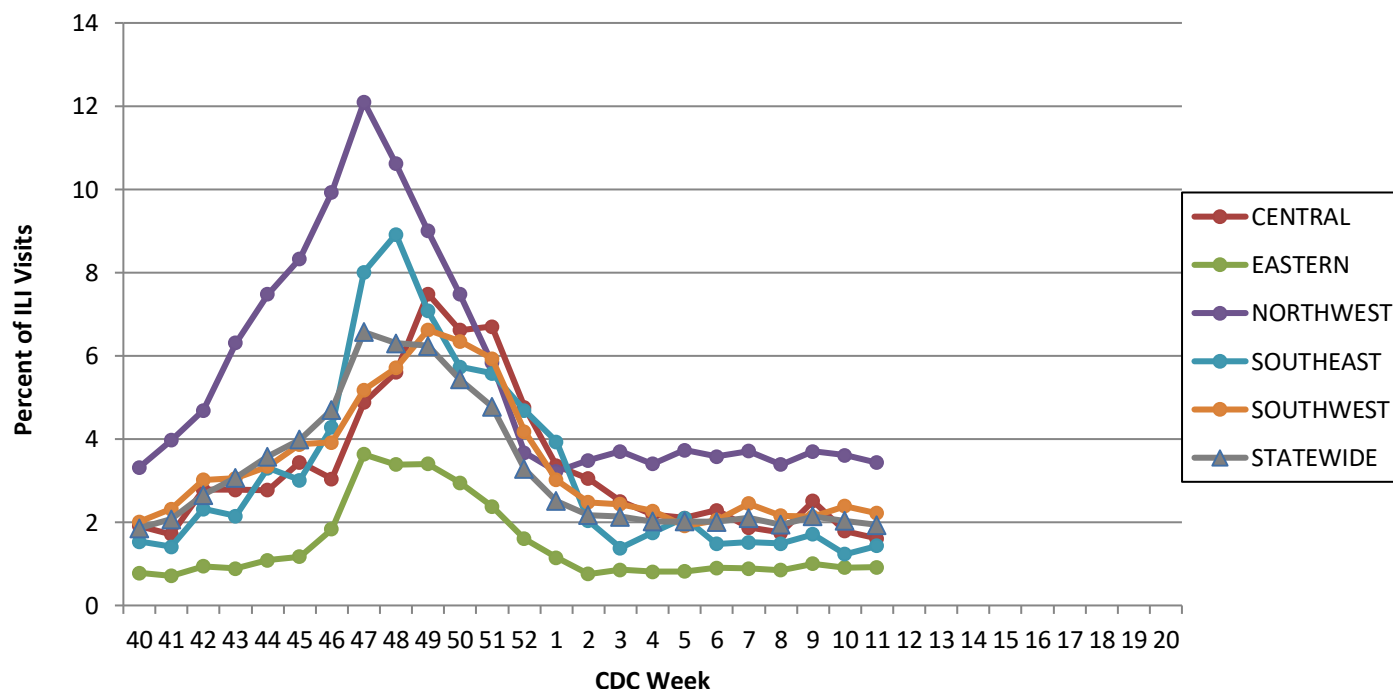
Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 11, 2023[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.
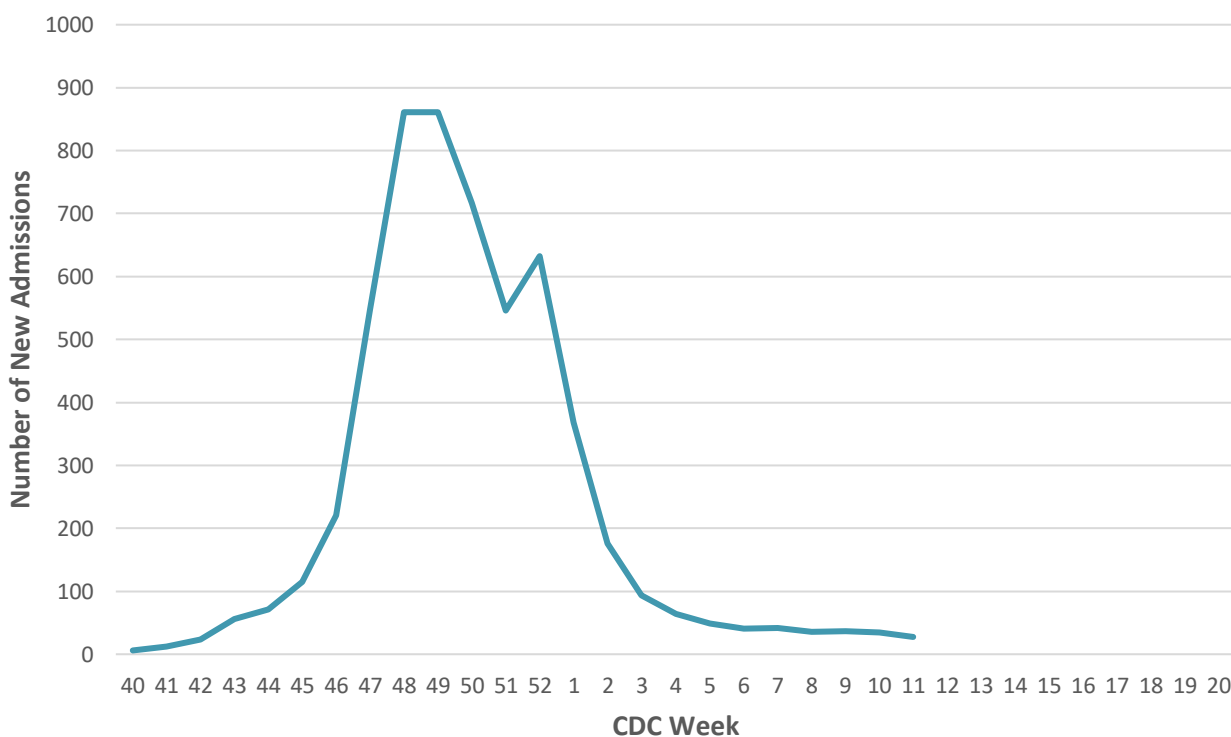
Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
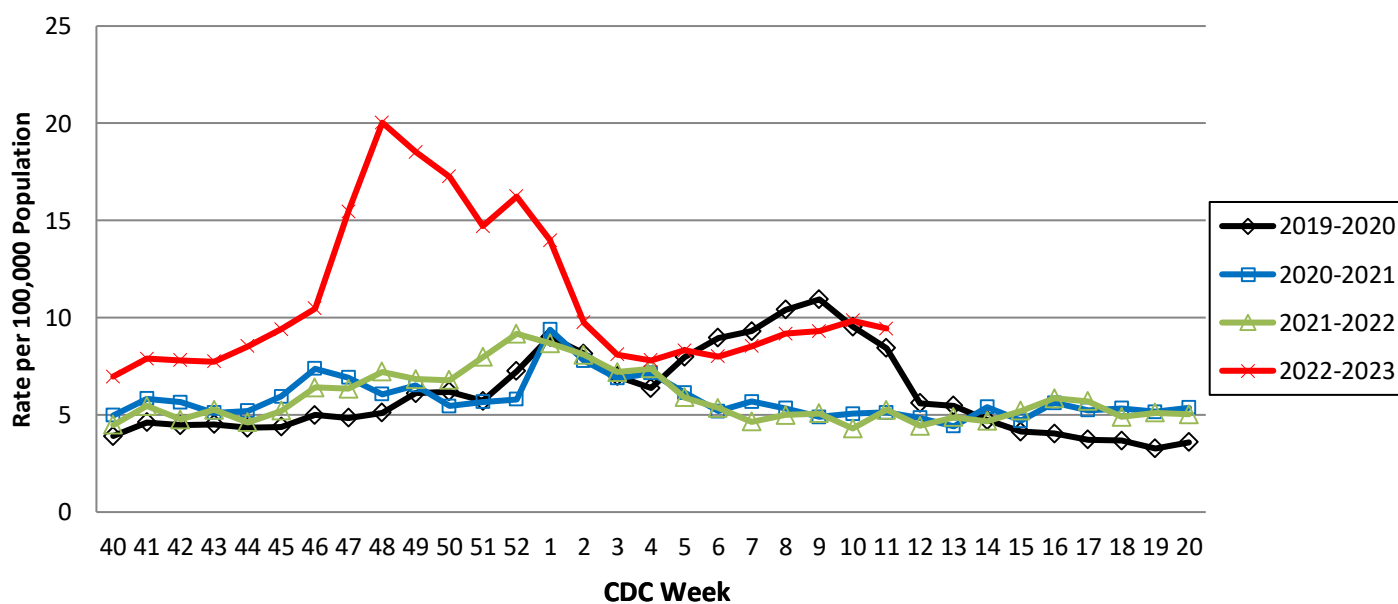[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season

Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov.
2022-2023 season-to-date through the week ending March 18, 2023 (Week 11).

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal.
Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 11, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 12: March 19, 2023 – March 25, 2023

All data are preliminary and may change as more reports are received.

Summary:

- Seasonal influenza activity and the Influenza-like illness (ILI) activity in Missouri remained Local[2] and Level 3 in the minimal category[3], respectively during Week 12.

- During Week 12 a total of 161 laboratory-positive[4] influenza cases (78 influenza A, 83 influenza B and 0 untyped) were reported. The influenza type for reported season-to-date cases includes 94.2% influenza A, 5.3% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 0.57% for Week 12.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE decreased to 1.75% for Week 12 (Figure 6).[5]

- Two hundred thirty two influenza-associated deaths have been reported in Missouri as of Week 10 (week ending March 11, 2023).[6]

- Eleven influenza outbreaks and two influenza-associated school closures have been reported as of Week 12.

- Seasonal influenza activity continues to decline nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Local is defined as: Outbreaks of influenza or increase in ILI cases and recent laboratory-confirmed influenza in a single region of the state...

[3]ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 12**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 12**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 10-12 (March 5, 2023 – March 25, 2023)[*]

Influenza Type	Week 10	Week 11	Week 12	2022-2023[*] Season-to-Date
Influenza A	123	111	78	100,948
Influenza B	132	106	83	5,687
Influenza Unknown Or Untyped	0	0	0	476
Total	255	217	161	107,111

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 12 (March 19, 2023 – March 25, 2023)[*‡]

Age Group	Week 12 Cases	Week 12 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	12	3.26	15,827	4,299.88
05-24	43	2.75	45,062	2,881.19
25-49	45	2.32	22,780	1,172.36
50-64	25	2.08	11,857	987.91
65+	36	3.39	11,584	1,090.73
Total	161	2.62	107,111	1,745.21

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 12 (March 19, 2023 – March 25, 2023)[*‡]
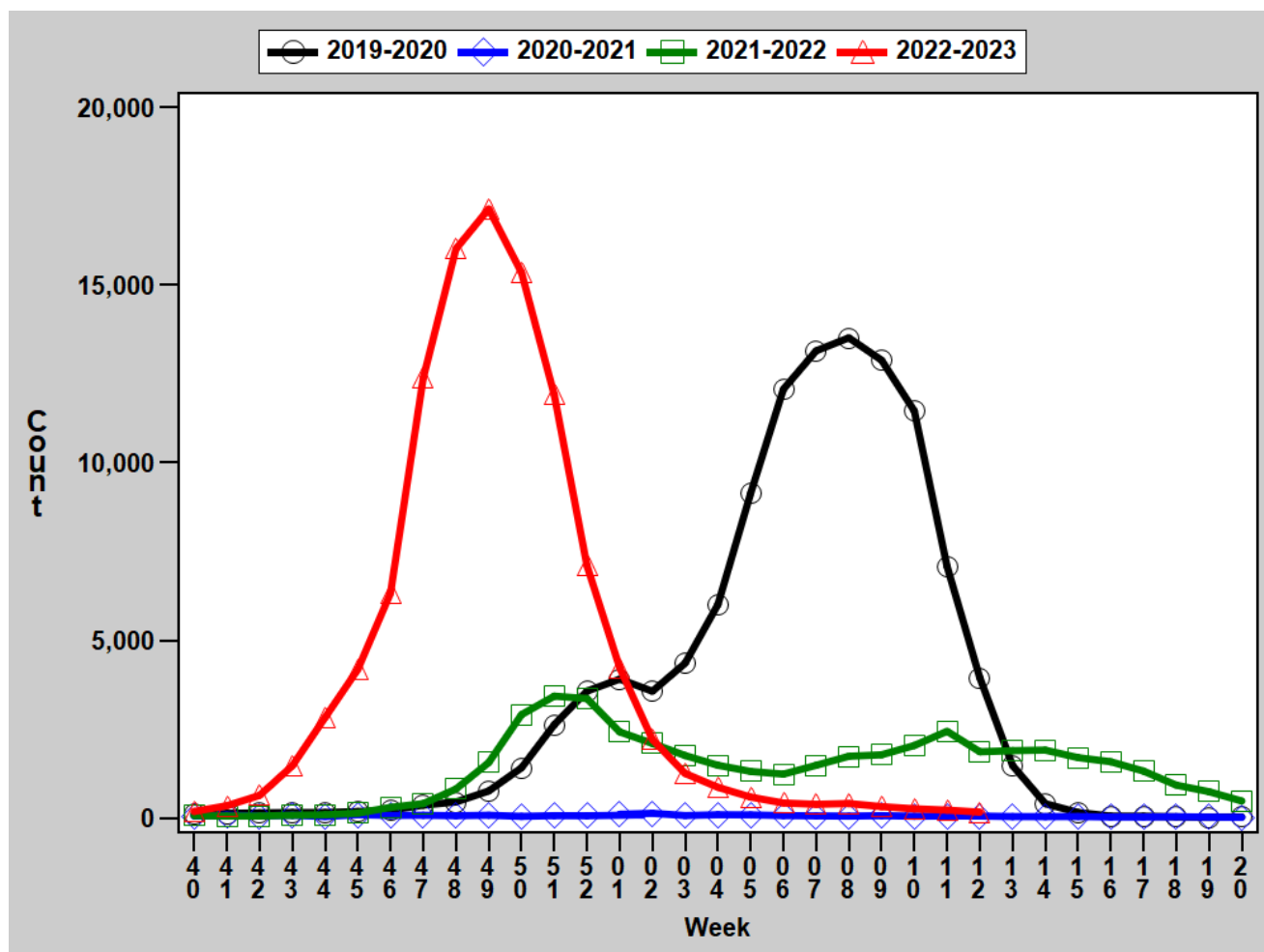
Region	Week 12 Cases	Week 12 Rate[‡]	2022-23[*] Season-to-Date	2022-23[*] Season-to-Date Rate[‡]
Central	44	6.52	11,089	1,643.26
Eastern	55	2.43	29,846	1,316.08
Northwest	16	0.98	30,732	1,877.64
Southeast	22	5.09	12,390	2,865.15
Southwest	24	2.28	23,054	2,194.30
Total	161	2.62	107,111	1,745.21

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending March 25, 2023 (Week 12). .Data Source: Missouri Health Information Surveillance System (WebSurv)

Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri

Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC). 2022-2023 season-to-date through the week ending March 25, 2023 (Week 12).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
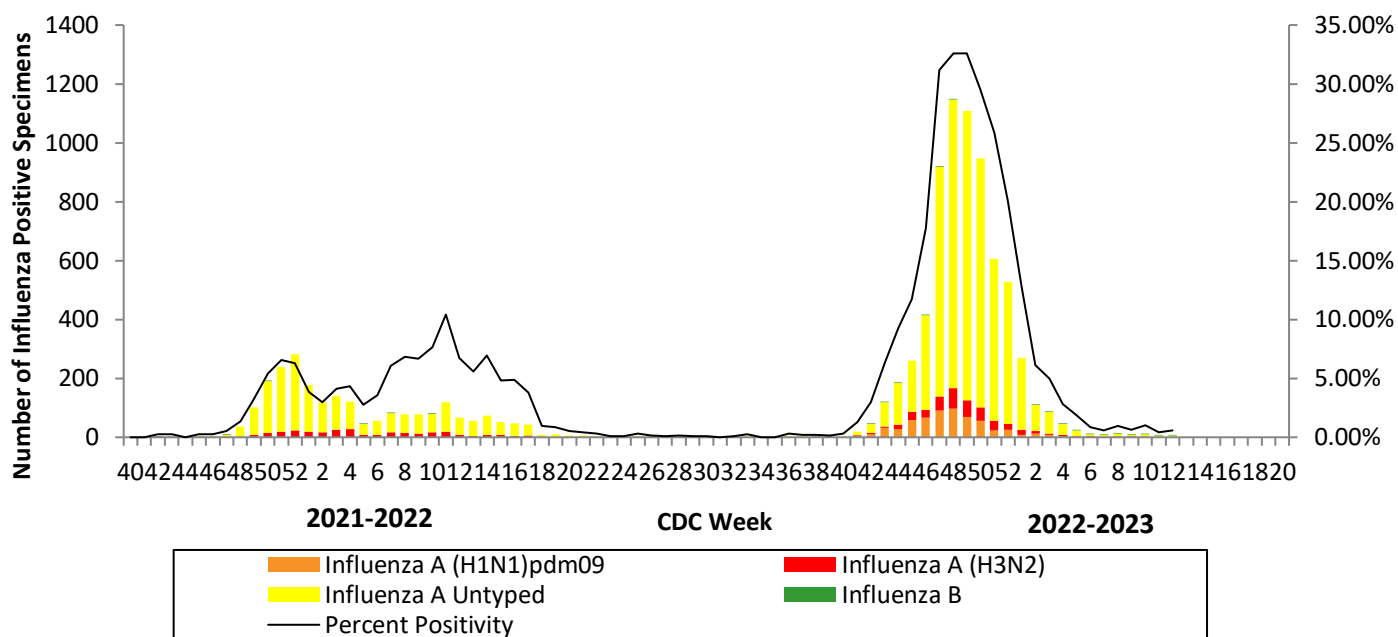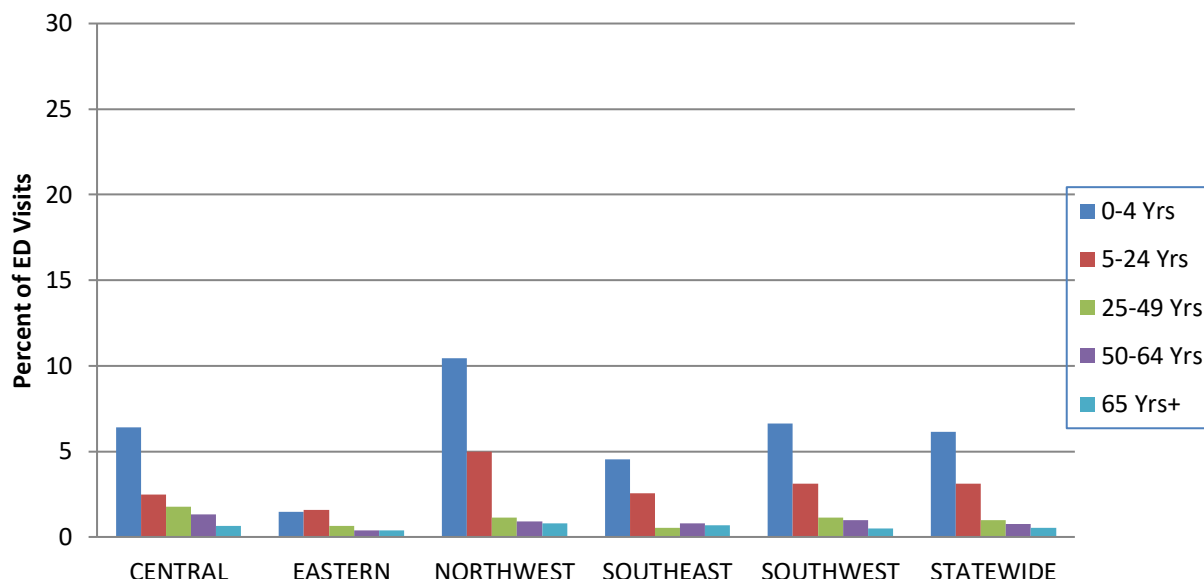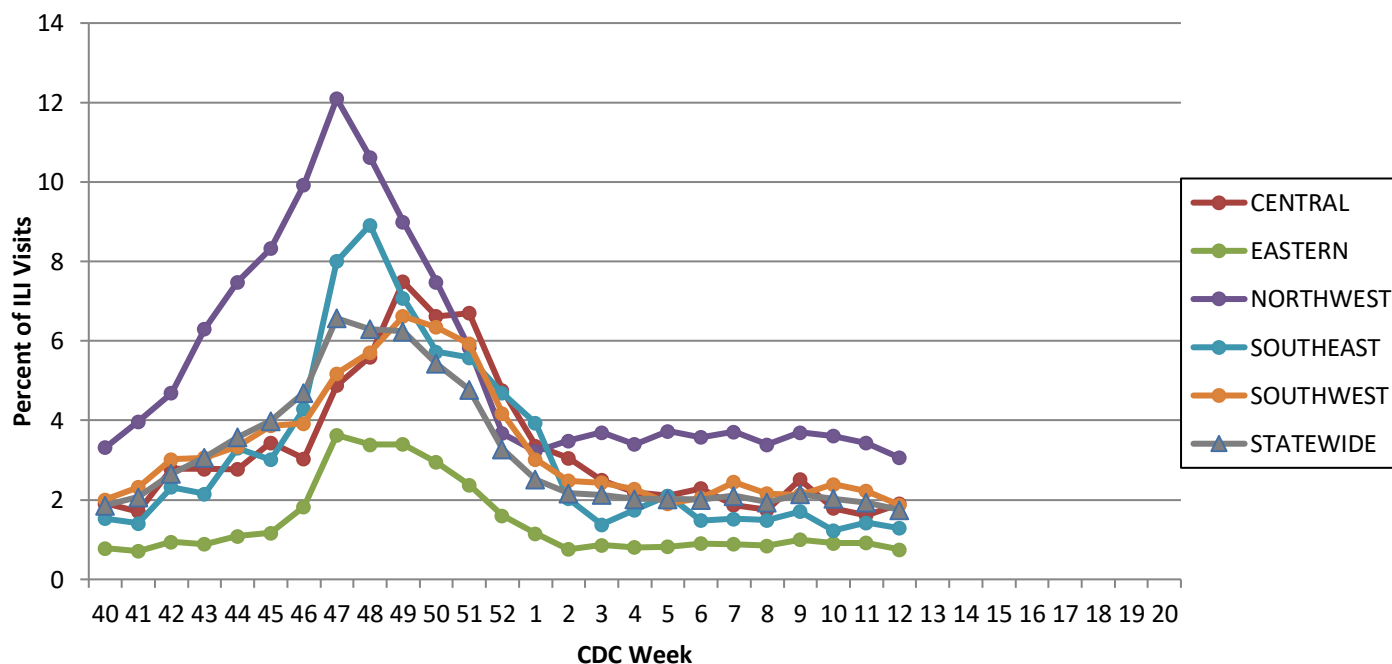
Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 12, 2023[*]
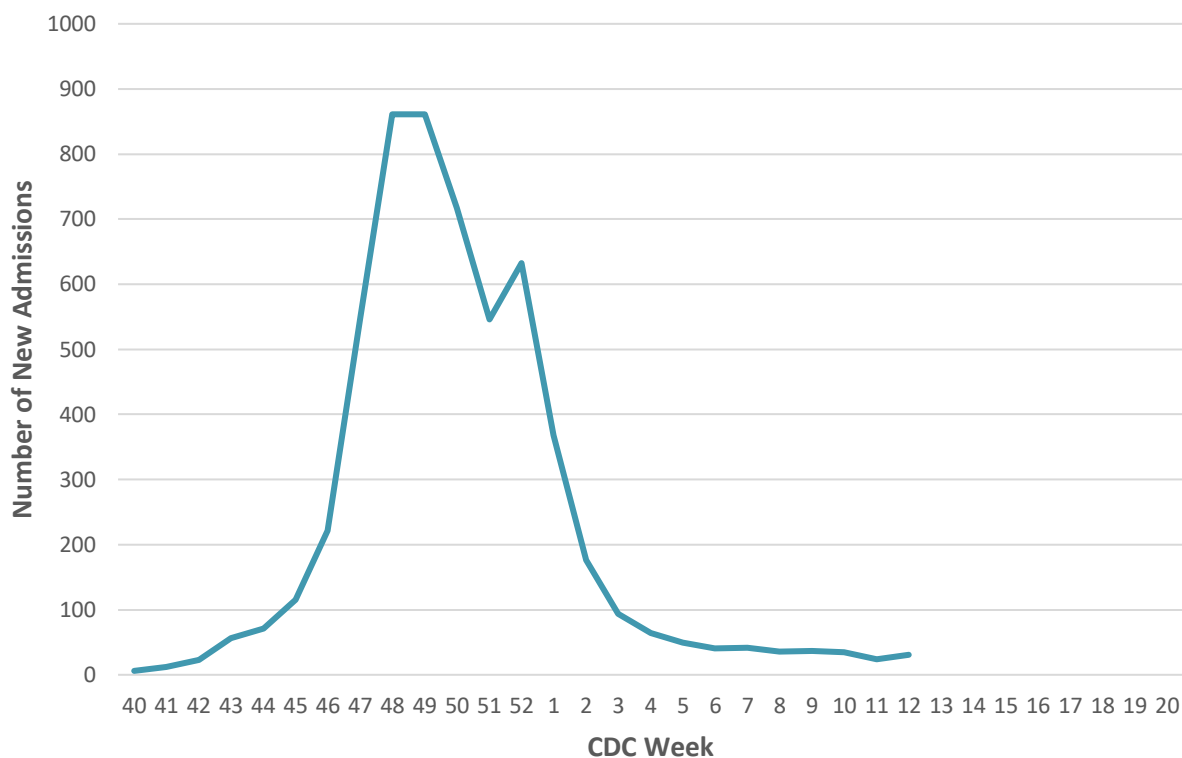

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]
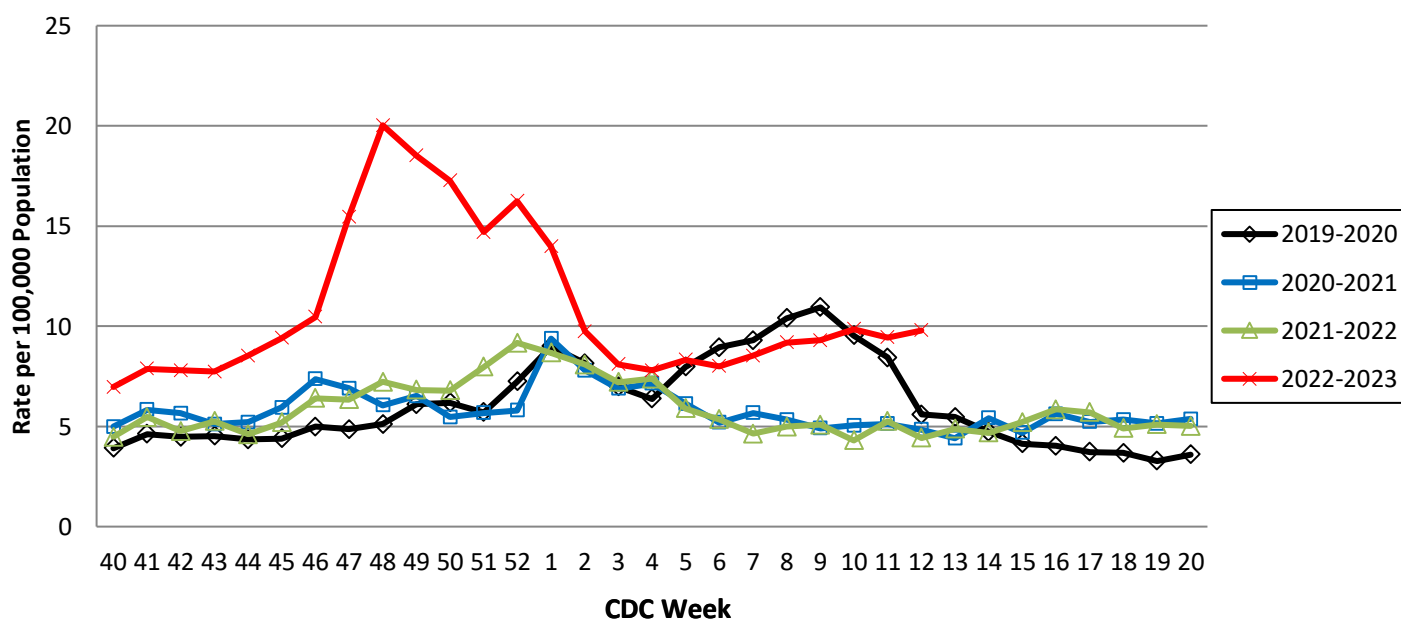

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

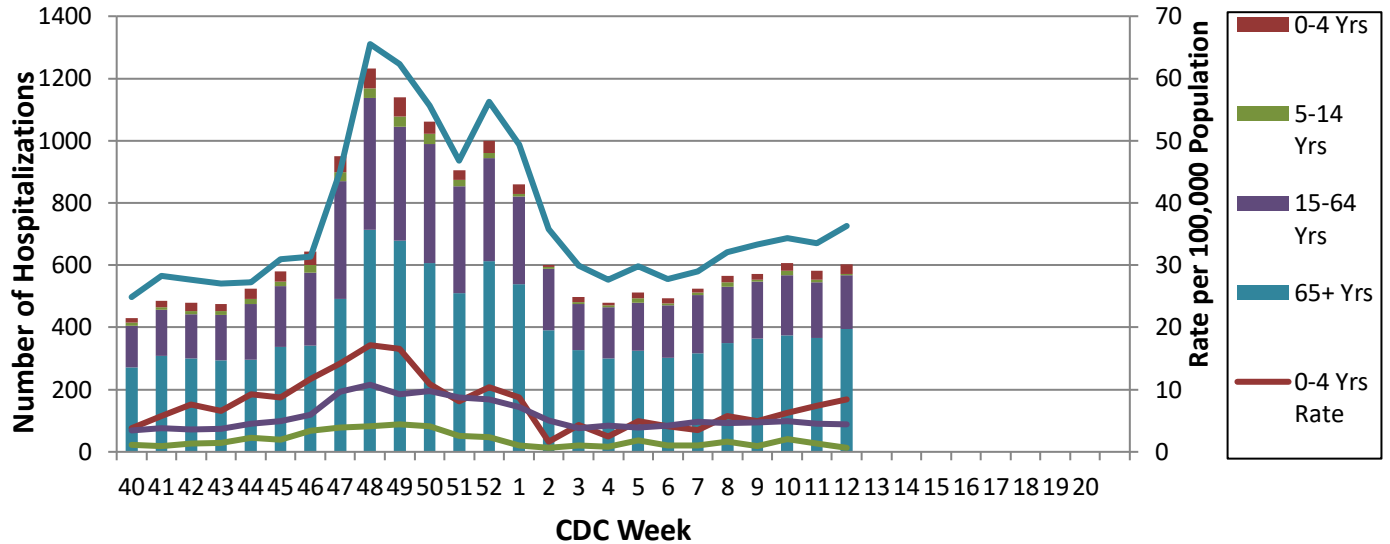**Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season**

Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov. 2022-2023 season-to-date through the week ending March 25, 2023 (Week 12).

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal. Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 12, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 13: March 26, 2023 – April 1, 2023

All data are preliminary and may change as more reports are received.

Summary:

- Seasonal influenza activity and the Influenza-like illness (ILI) activity in Missouri remained Local[2] and Level 3 in the minimal category[3], respectively during Week 13.

- During Week 13 a total of 111 laboratory-positive[4] influenza cases (57 influenza A, 54 influenza B and 0 untyped) were reported. The influenza type for reported season-to-date cases includes 94.2% influenza A, 5.4% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 0.49% for Week 13. The number of Missouri facilities reporting to NREVSS for Week 13 was limited at the time of this report.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE decreased to 1.65% for Week 13 (Figure 6).[5]

- Two hundred thirty three influenza-associated deaths have been reported in Missouri as of Week 11 (week ending March 18, 2023).[6]

- Eleven influenza outbreaks and two influenza-associated school closures have been reported as of Week 13.

- Seasonal influenza activity continues to decline nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Local is defined as: Outbreaks of influenza or increase in ILI cases and recent laboratory-confirmed influenza in a single region of the state...

[3]ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 13**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 13**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 11-13 (March 12, 2023 – April 1, 2023)[*]

Influenza Type	Week 11	Week 12	Week 13	2022-2023[*] Season-to-Date
Influenza A	116	99	57	101,036
Influenza B	108	118	54	5,789
Influenza Unknown Or Untyped	0	0	0	476
Total	224	217	111	107,301

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 13 (March 26, 2023 – April 1, 2023)[*‡]

Age Group	Week 13 Cases	Week 13 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	12	3.26	15,851	4,306.40
05-24	33	2.11	45,118	2,884.77
25-49	27	1.39	22,818	1,174.31
50-64	12	1.00	11,879	989.74
65+	27	2.54	11,634	1,095.44
Total	111	1.81	107,301	1,748.31

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 13 (March 26, 2023 – April 1, 2023)[*‡]
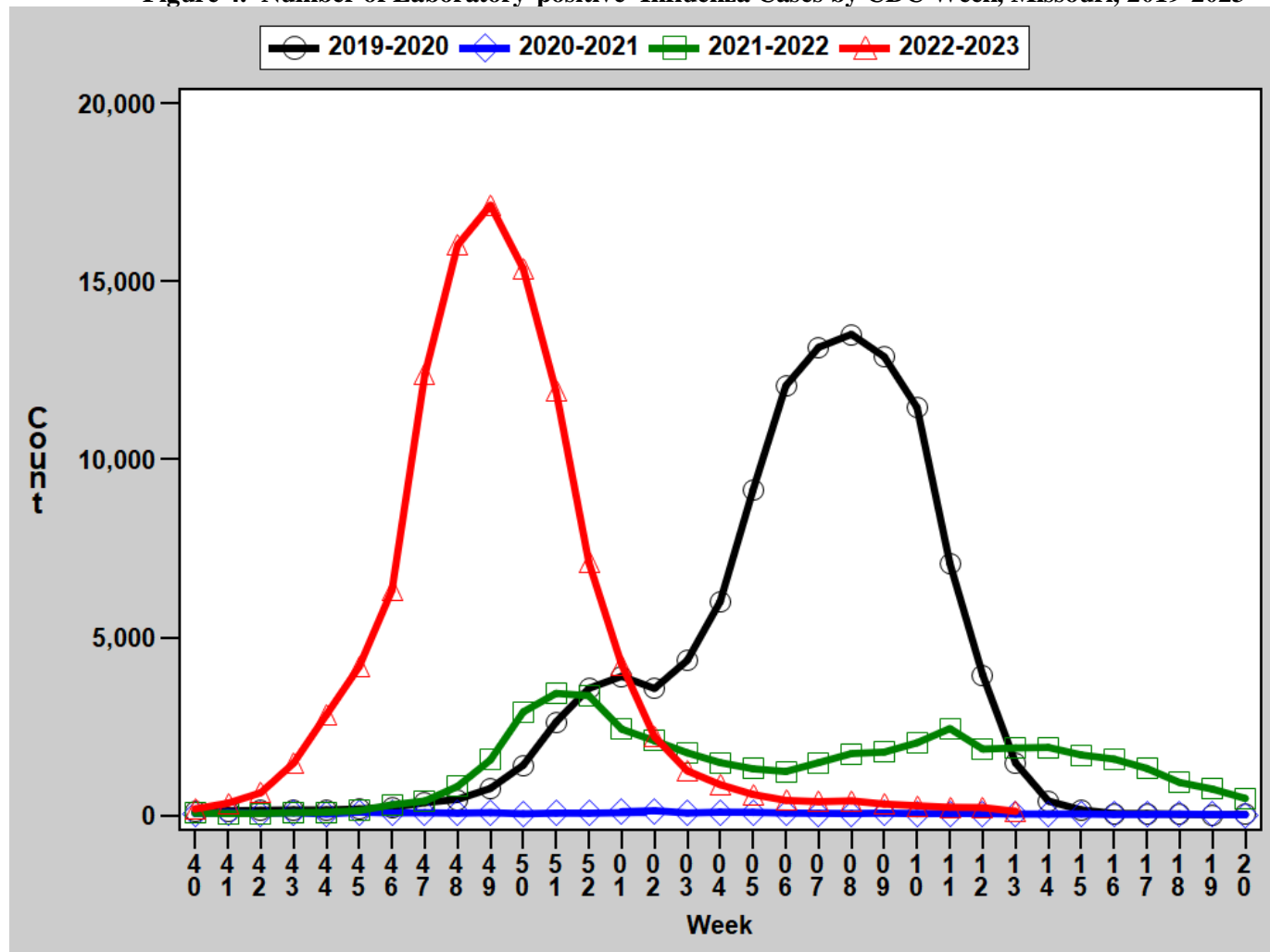
Region	Week 13 Cases	Week 13 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	21	3.11	11,121	1,648.00
Eastern	30	1.32	29,879	1,317.54
Northwest	20	1.22	30,785	1,877.64
Southeast	17	3.93	12,412	2,870.24
Southwest	23	2.19	23,104	2,199.06
Total	111	1.81	107,302	1,748.31

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
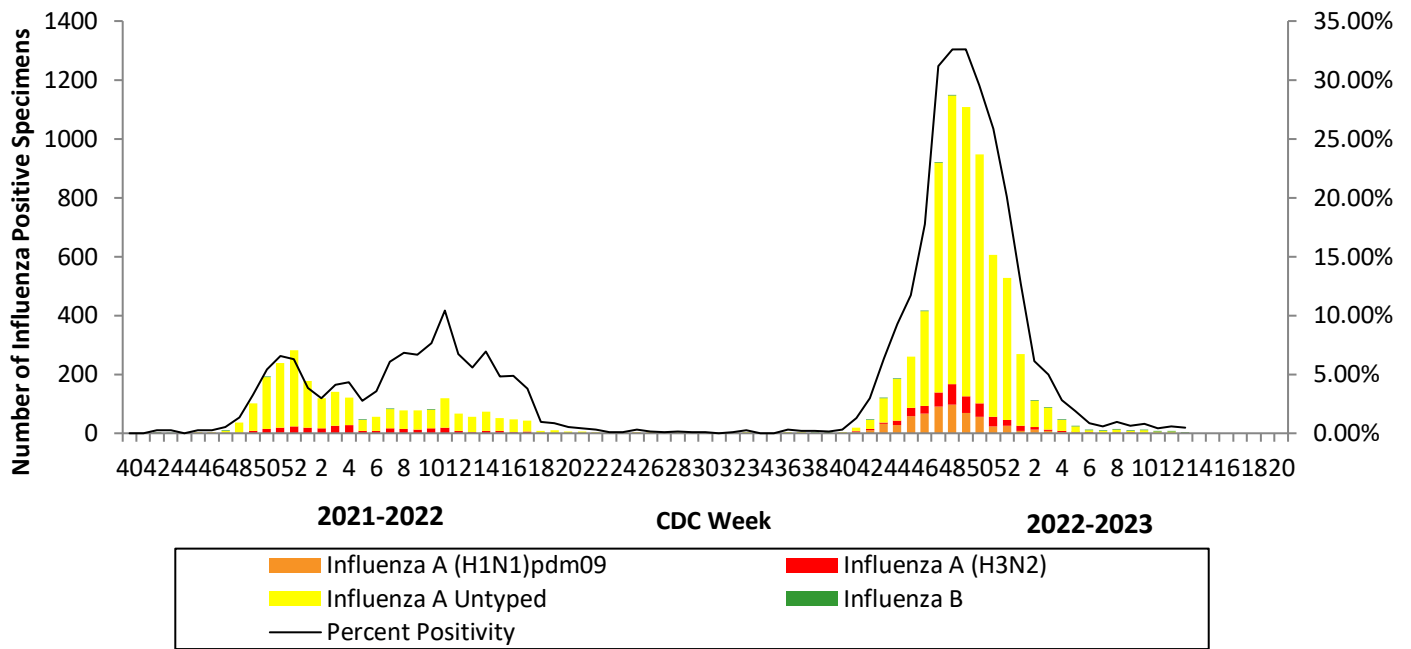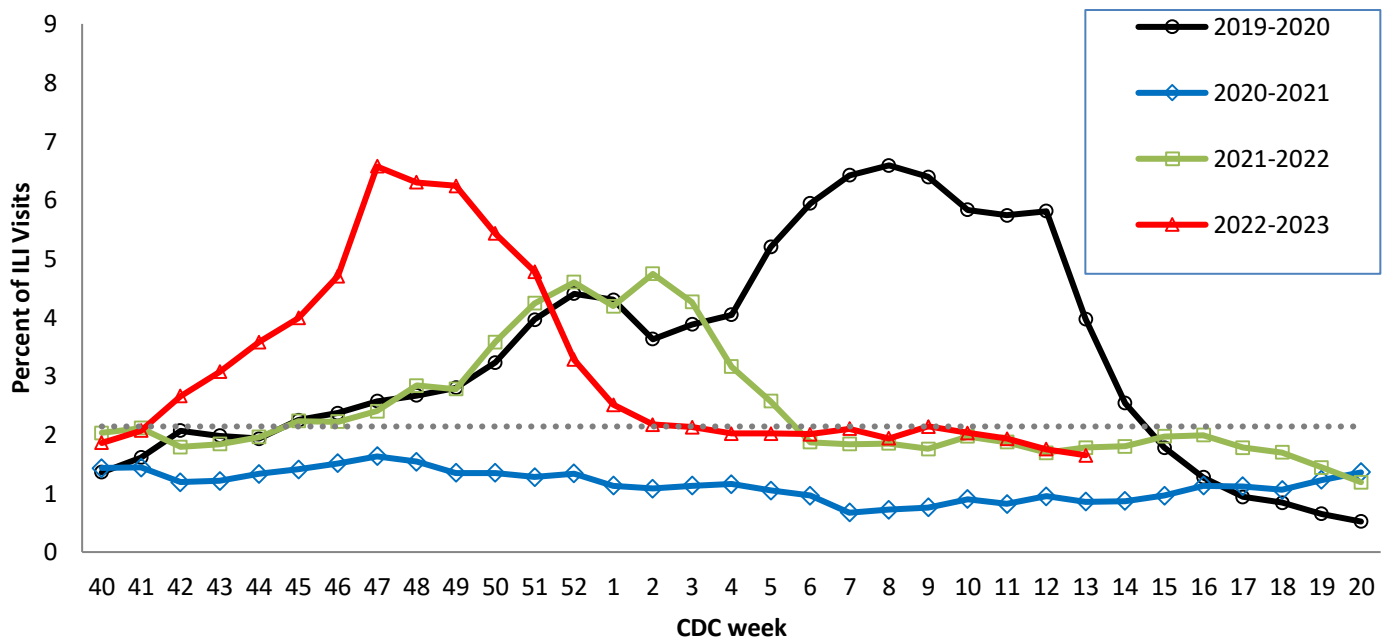[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending March 25, 2023 (Week 12). .Data Source: Missouri Health Information Surveillance System (WebSurv)

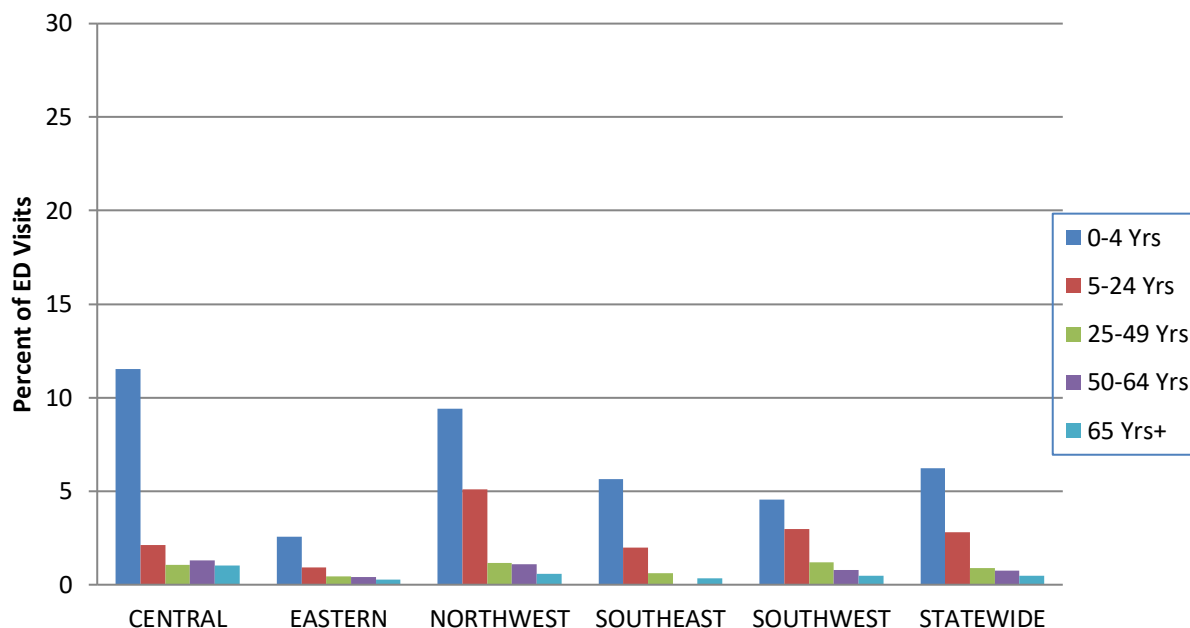## Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri

Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
2022-2023 season-to-date through the week ending March 25, 2023 (Week 12).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]
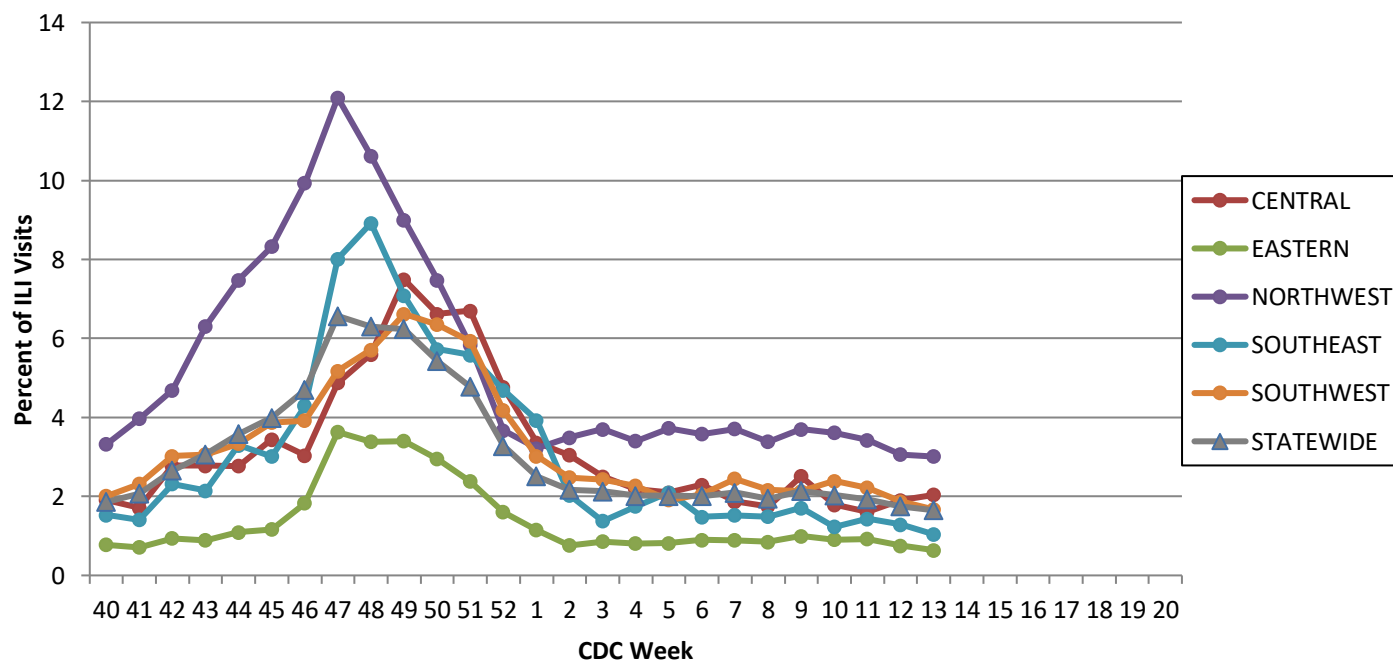

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI
visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS),
Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 13, 2023[*]
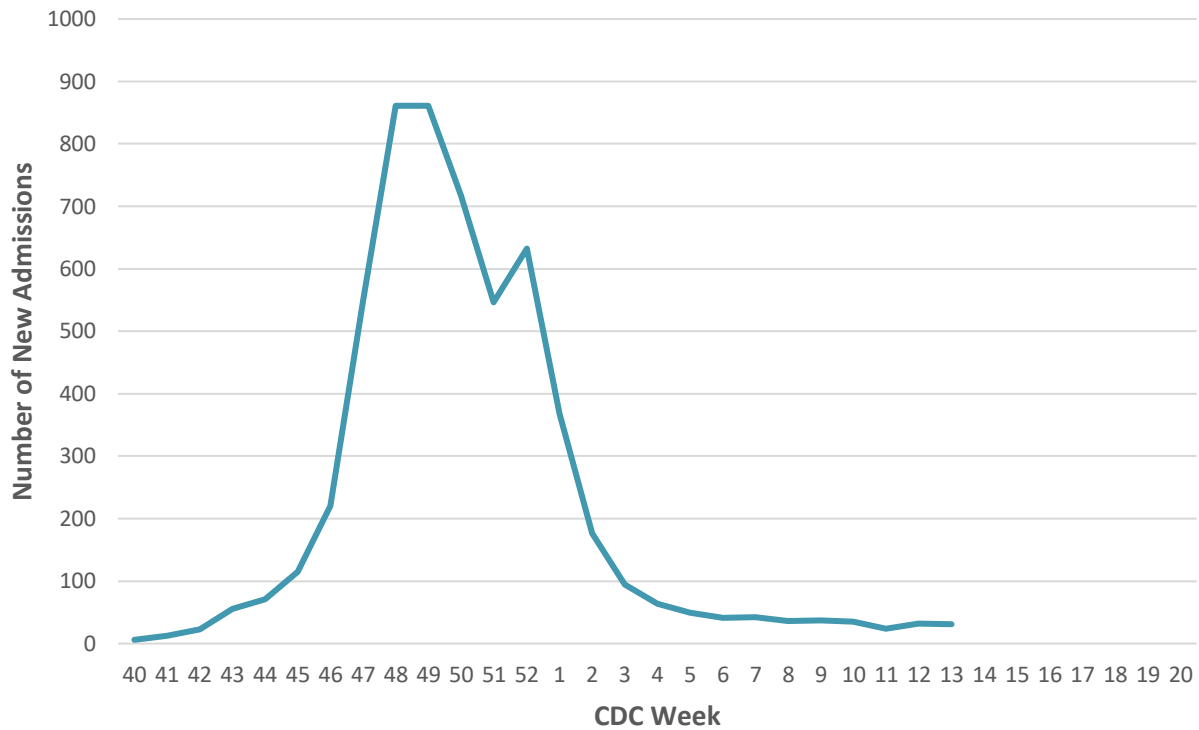

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]
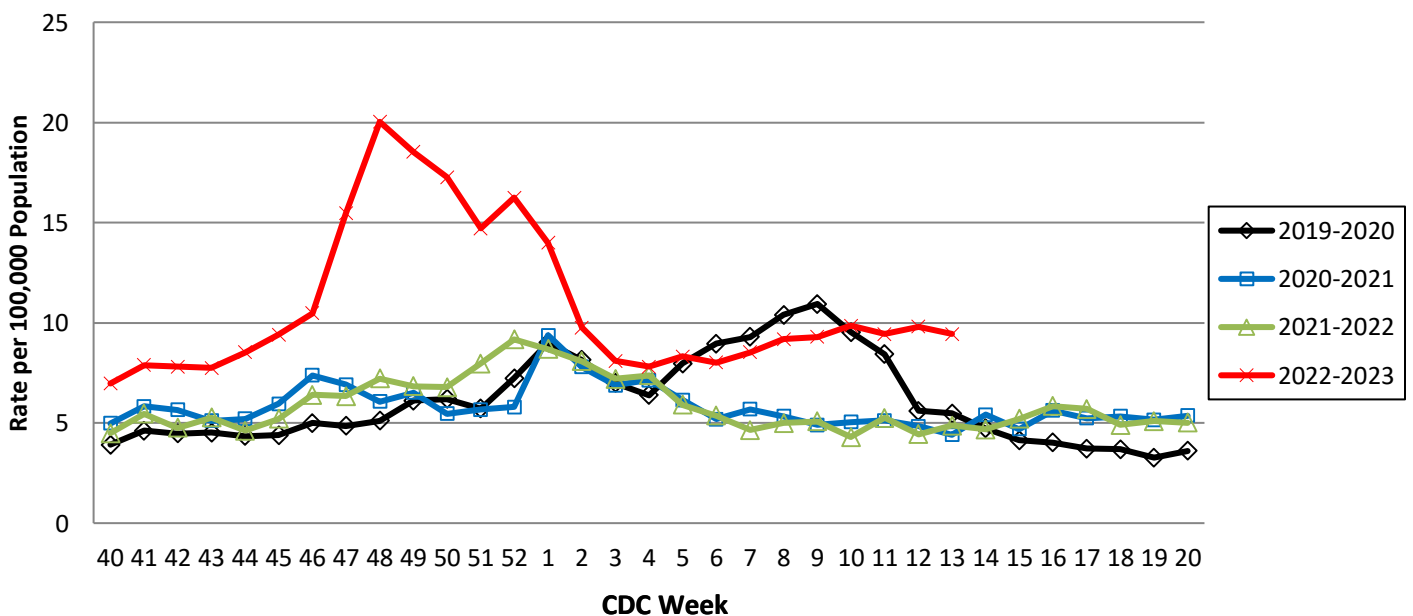

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

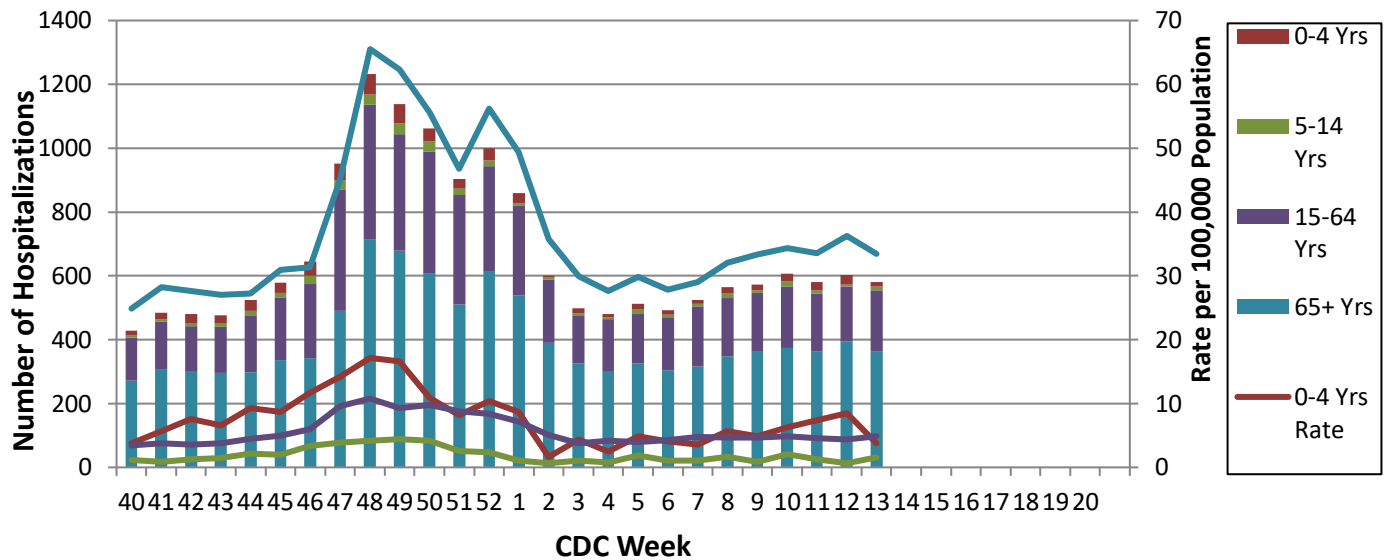**Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season**

Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov.
2022-2023 season-to-date through the week ending April 1, 2023 (Week 13).

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal.
Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 13, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 14: April 2, 2023 – April 8, 2023

All data are preliminary and may change as more reports are received.

Summary:

- Seasonal influenza activity and the Influenza-like illness (ILI) activity in Missouri remained Local[2] and decreased to Level 2 in the minimal category[3], respectively during Week 14.

- During Week 14 a total of 105 laboratory-positive[4] influenza cases (37 influenza A, 68 influenza B and 0 untyped) were reported. The influenza type for reported season-to-date cases includes 94.1% influenza A, 5.5% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 0.23% for Week 14. The number of Missouri facilities reporting to NREVSS for Week 14 was limited at the time of this report.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE decreased to 1.51% for Week 14 (Figure 6).[5]

- Two hundred thirty three influenza-associated deaths have been reported in Missouri as of Week 12 (week ending March 25, 2023).[6]

- Eleven influenza outbreaks and two influenza-associated school closures have been reported as of Week 14.

- Seasonal influenza activity continues to decline nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Local is defined as: Outbreaks of influenza or increase in ILI cases and recent laboratory-confirmed influenza in a single region of the state...

[3] ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 14**

- **Reported Week-specific Rate per 100,000 Population, CDC Week 14**

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**

- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 12-14 (March 19, 2023 – April 8, 2023)[*]

Influenza Type	Week 12	Week 13	Week 14	2022-2023[*] Season-to-Date
Influenza A	103	70	37	101,094
Influenza B	131	79	68	5,914
Influenza Unknown Or Untyped	0	0	0	476
Total	234	149	105	107,484

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 14 (April 2, 2023 – April 8, 2023)[*‡]

Age Group	Week 14 Cases	Week 14 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	18	4.89	15,879	4,314.01
05-24	37	2.37	45,174	2,888.35
25-49	26	1.34	22,865	1,176.73
50-64	15	1.25	11,908	992.16
65+	9	0.85	11,657	1,097.61
Total	105	1.71	107,484	1,751.29

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)

[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 14 (April 2, 2023 – April 8, 2023)[*‡]
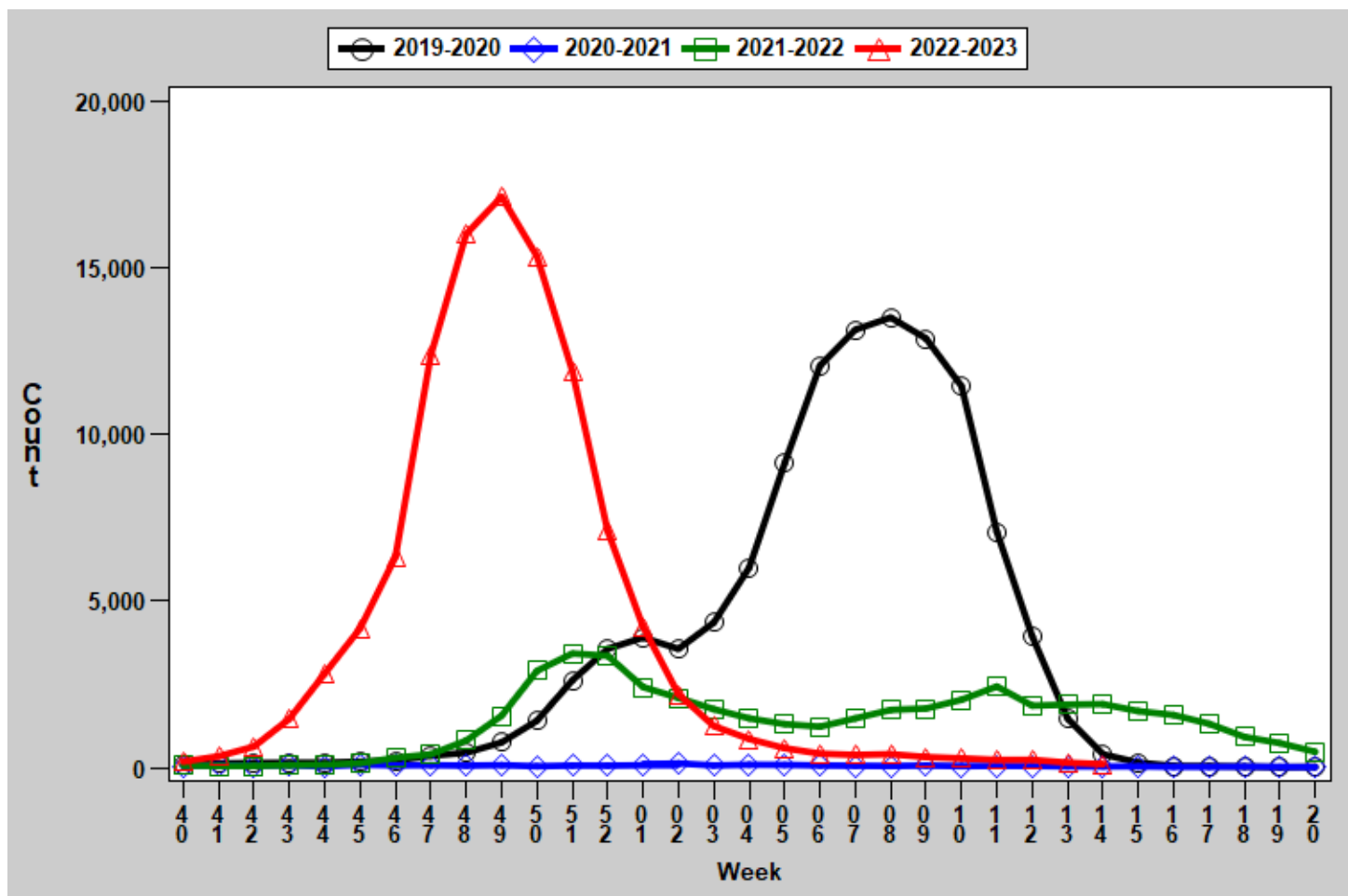
Region	Week 14 Cases	Week 14 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	30	4.45	11,185	1,657.48
Eastern	22	0.97	29,908	1,318.82
Northwest	25	1.53	30,830	1,883.62
Southeast	17	3.93	12,433	2,875.09
Southwest	11	1.05	23,128	2,201.34
Total	105	1.71	107,484	1,751.29

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
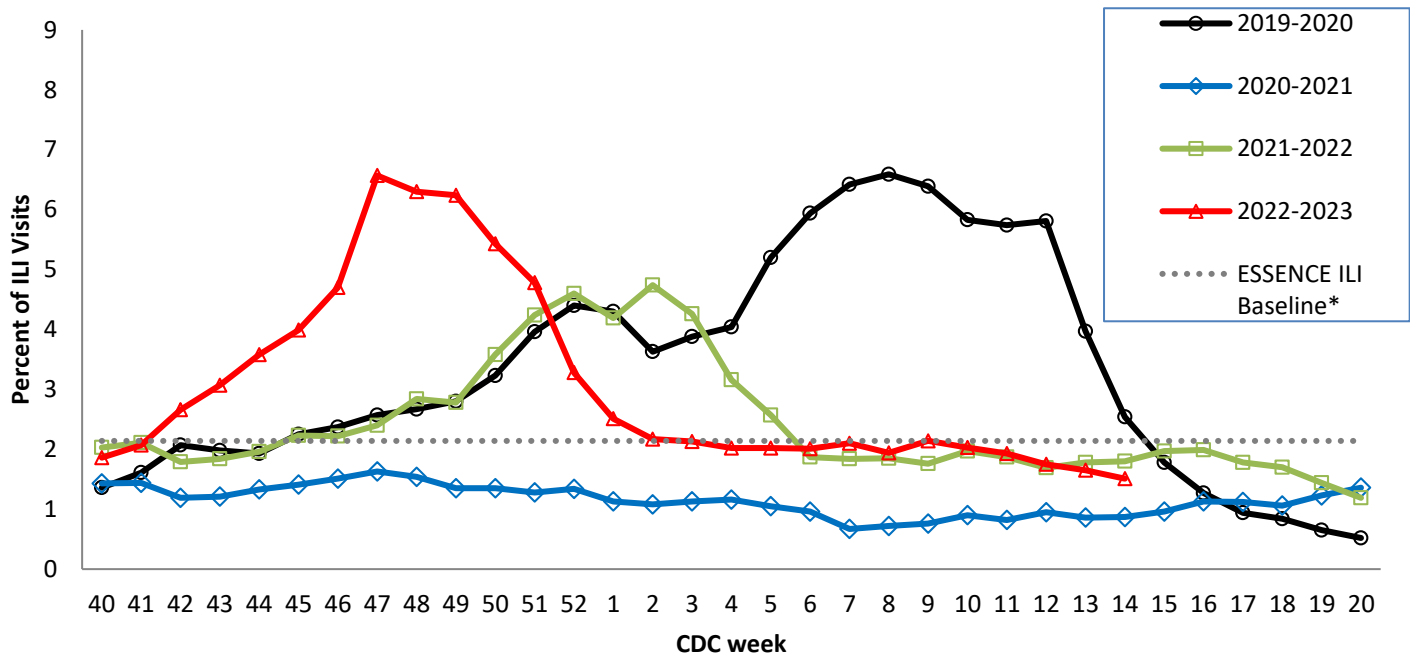[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*·]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending April 8, 2023 (Week 14). .Data Source: Missouri Health Information Surveillance System (WebSurv)

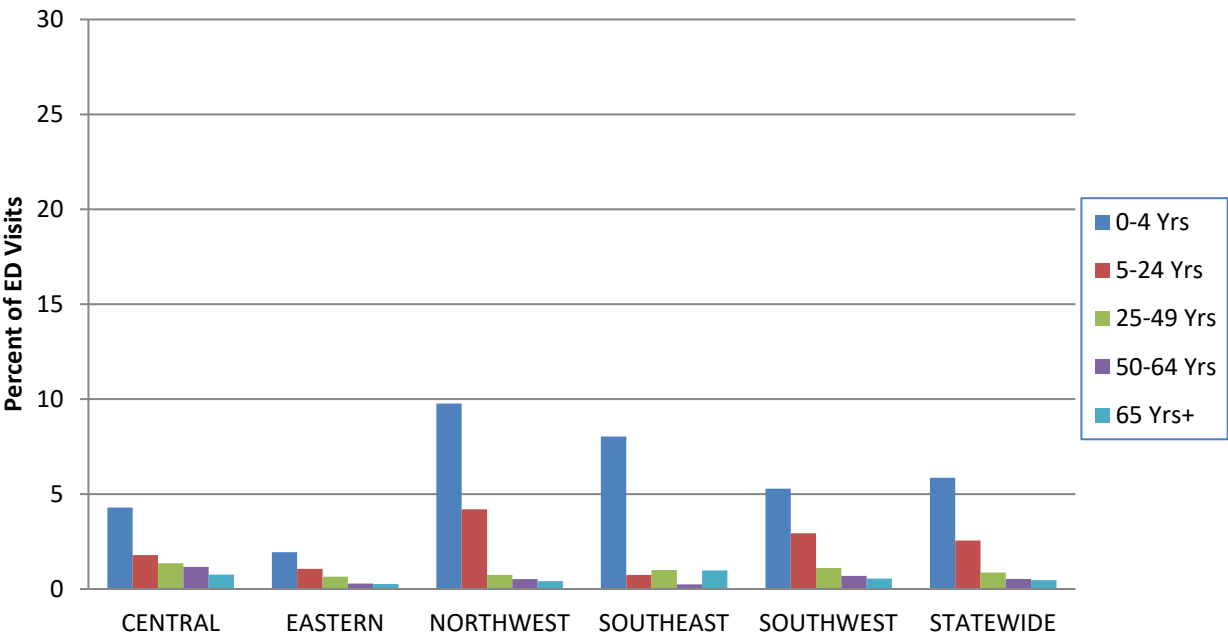**Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri**
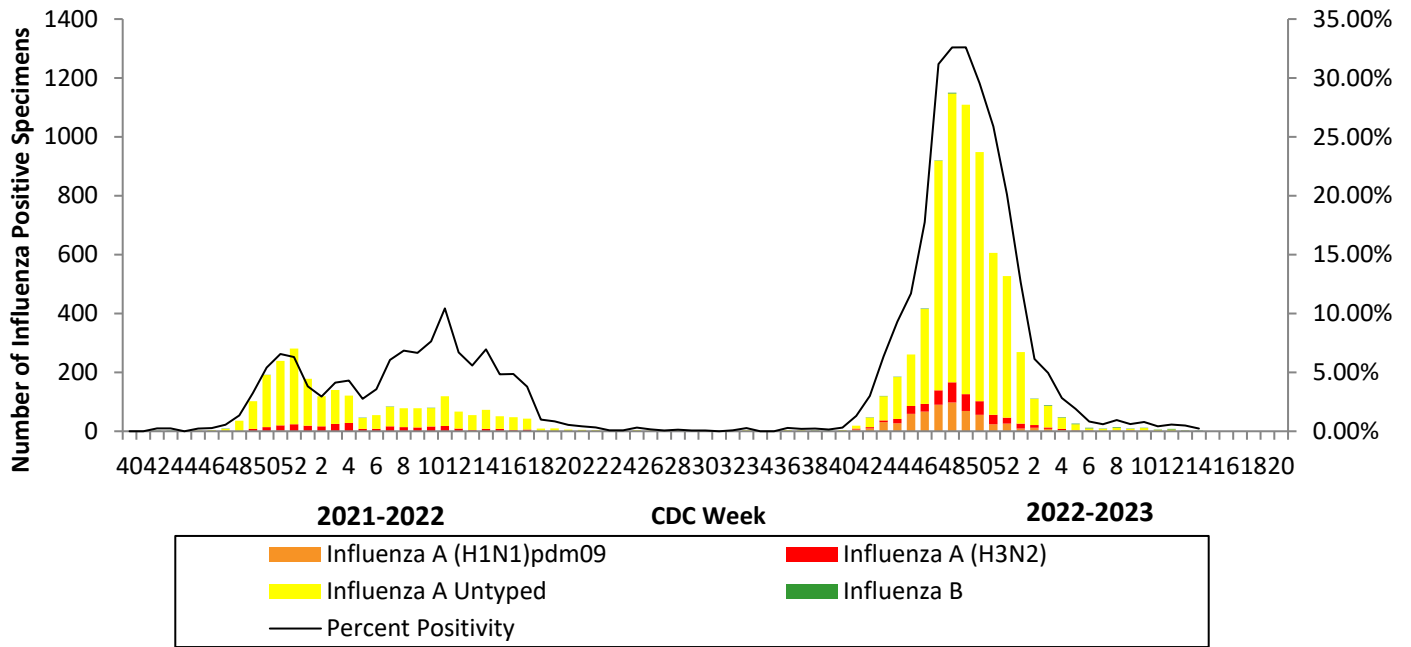
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
2022-2023 season-to-date through the week ending April 8, 2023 (Week 14).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]
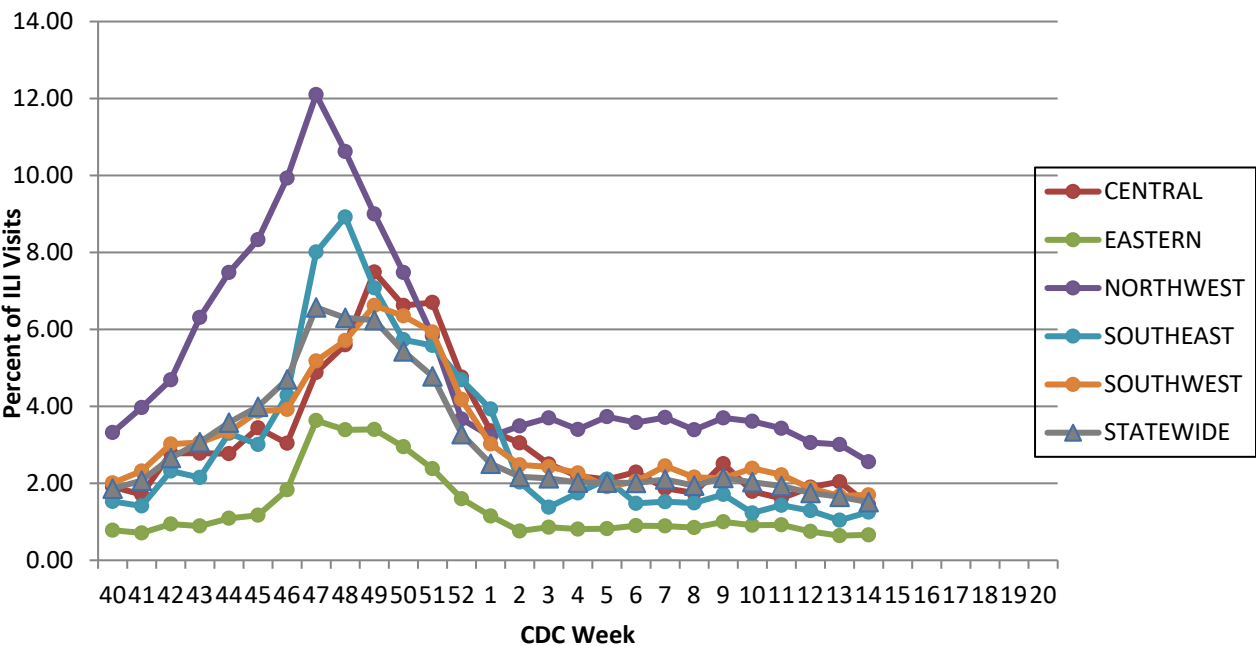

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 14, 2023[*]
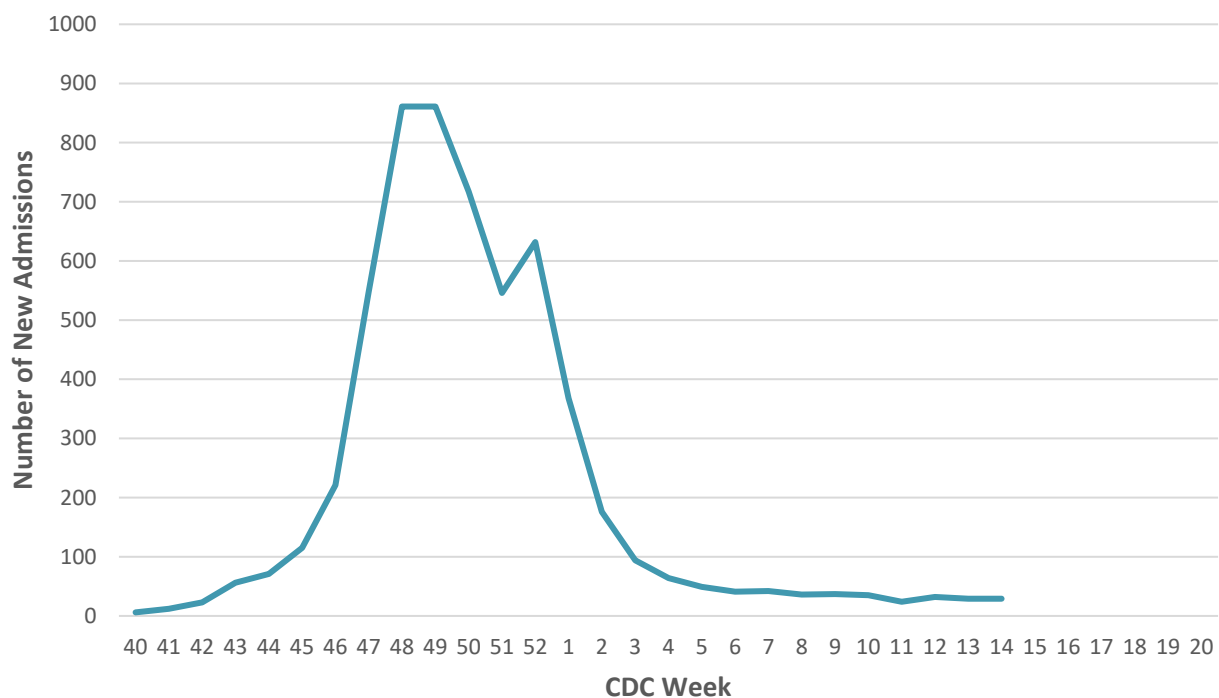

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]
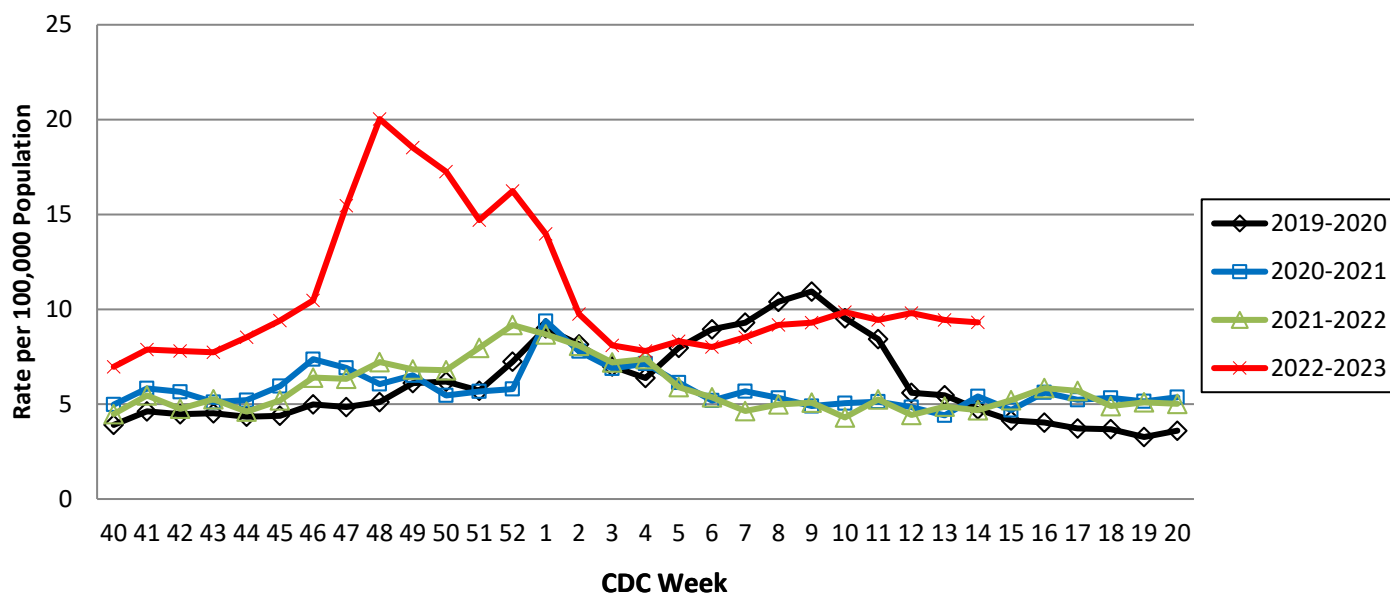

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

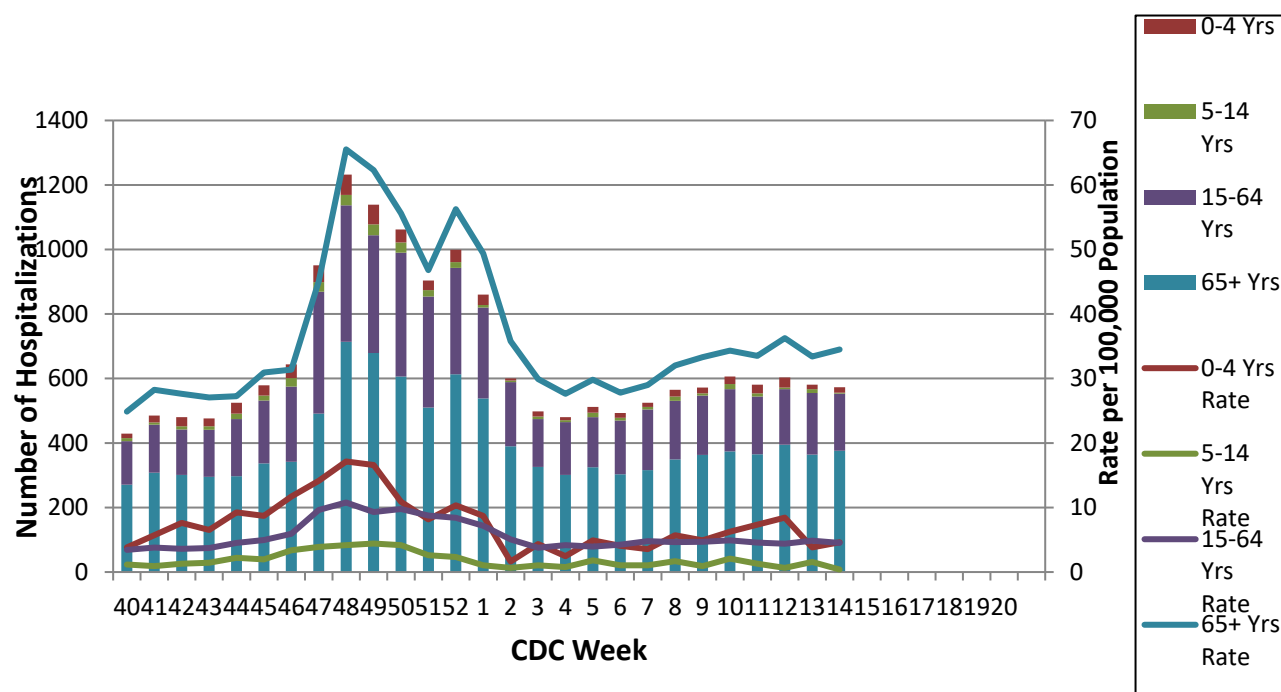**Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season**

Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov.
2022-2023 season-to-date through the week ending April 8, 2023 (Week 14).

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal.
Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 14, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 15: April 9, 2023 – April 15, 2023

All data are preliminary and may change as more reports are received.

Summary:

- Seasonal influenza activity and the Influenza-like illness (ILI) activity in Missouri remained Local[2] and decreased to Level 1 in the minimal category[3], respectively during Week 15.

- During Week 15 a total of 97 laboratory-positive[4] influenza cases (42 influenza A, 55 influenza B and 0 untyped) were reported. The influenza type for reported season-to-date cases includes 94.0% influenza A, 5.6% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 0.08% for Week 15.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE decreased to 1.31% for Week 15 (Figure 6).[5]

- Two hundred thirty five influenza-associated deaths have been reported in Missouri as of Week 13 (week ending March 25, 2023).[6]

- Eleven influenza outbreaks and two influenza-associated school closures have been reported as of Week 15.

- Seasonal influenza activity continues to decline nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Local is defined as: Outbreaks of influenza or increase in ILI cases and recent laboratory-confirmed influenza in a single region of the state...

[3] ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 15**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 15**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 13-15 (March 26, 2023 – April 15, 2023)[*]

Influenza Type	Week 13	Week 14	Week 15	2022-2023[*] Season-to-Date
Influenza A	81	61	42	101,183
Influenza B	93	88	55	6,010
Influenza Unknown Or Untyped	0	0	0	476
Total	174	149	97	107,669

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 15 (April 9, 2023 – April 15, 2023)[*‡]

Age Group	Week 15 Cases	Week 15 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	19	5.16	15,906	4,321.34
05-24	31	1.98	45,236	2,892.31
25-49	20	1.03	22,913	1,179.20
50-64	10	0.83	11,929	993.91
65+	17	1.60	11,684	1,100.15
Total	97	1.58	107,669	1,754.30

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)

[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 15 (April 2, 2023 – April 8, 2023)[*‡]
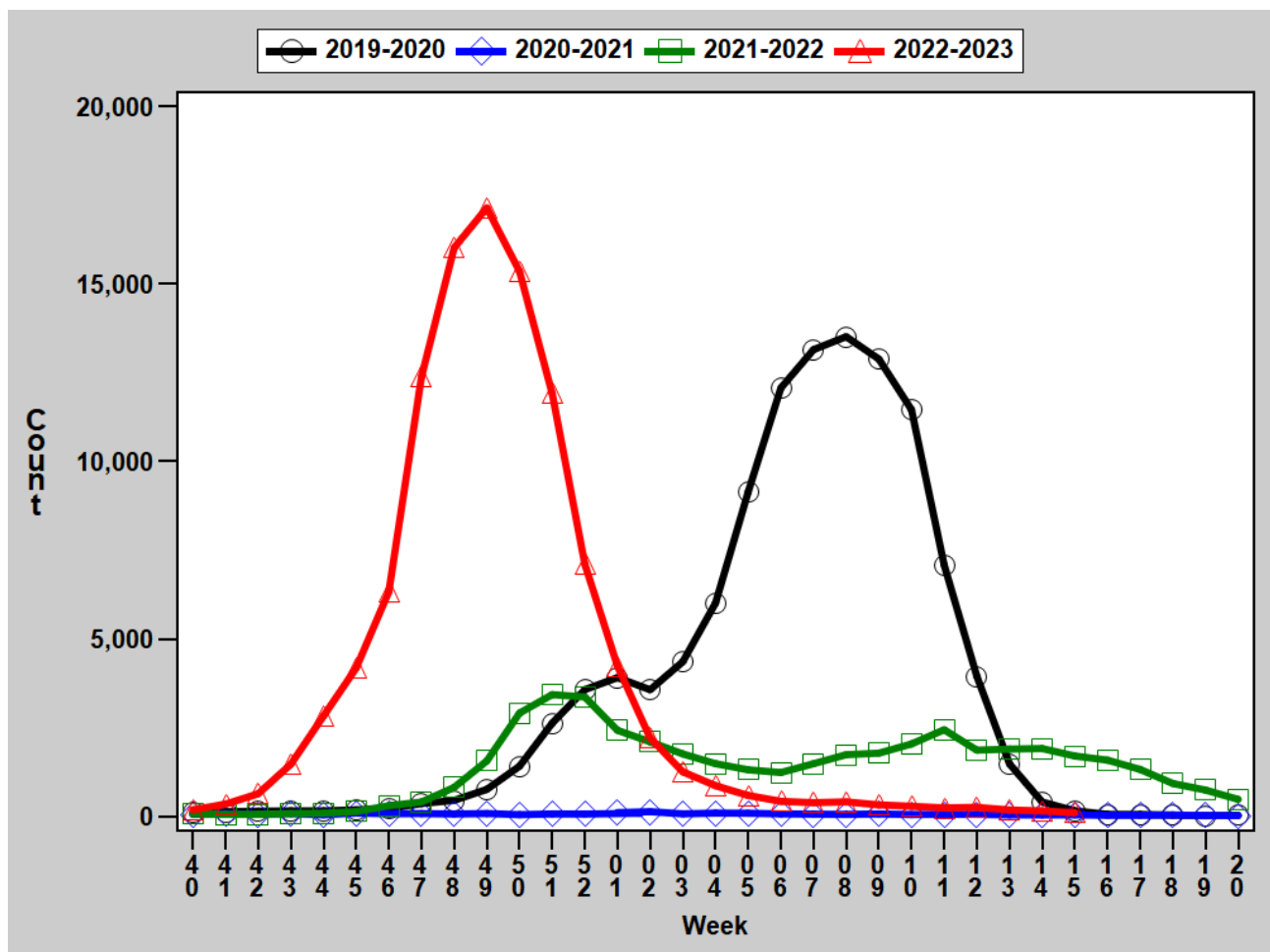
Region	Week 15 Cases	Week 15 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	16	2.37	11,205	1,660.45
Eastern	45	1.98	29,986	1,322.26
Northwest	17	1.04	30,872	1,322.26
Southeast	5	1.16	12,446	2,878.10
Southwest	14	1.33	23,160	2,204.39
Total	97	1.71	107,669	1,754.30

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
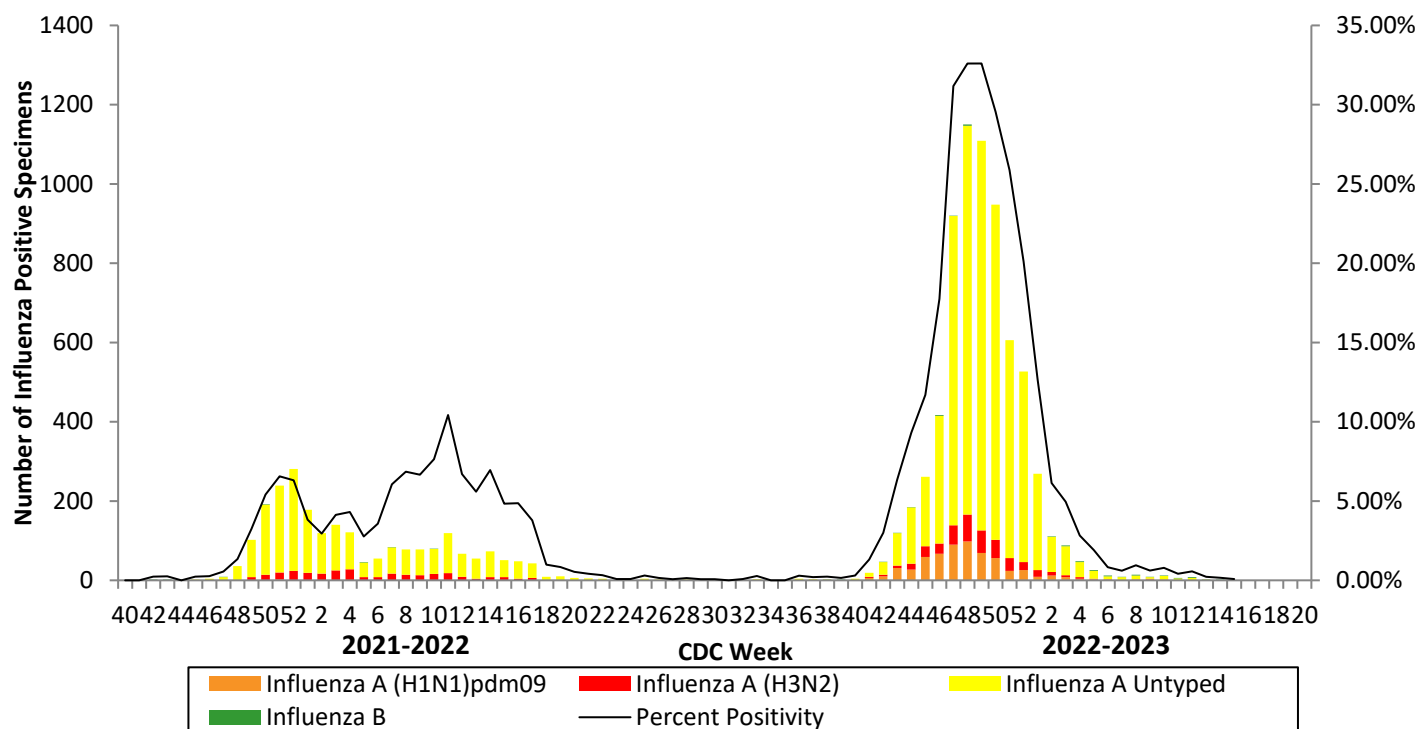[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
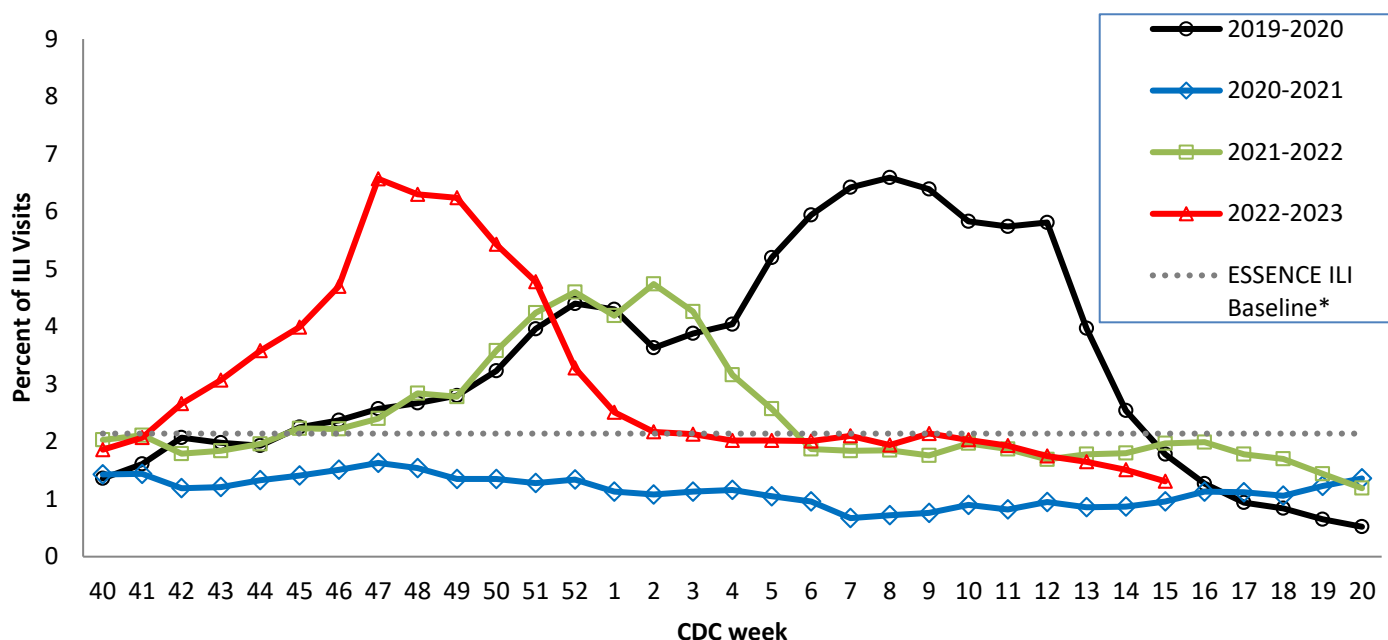[*]2022-2023 season-to-date through the week ending April 15, 2023 (Week 15). .Data Source: Missouri Health Information Surveillance System (WebSurv)

Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri

Legend:
- Influenza A (H1N1)pdm09
- Influenza A (H3N2)
- Influenza A Untyped
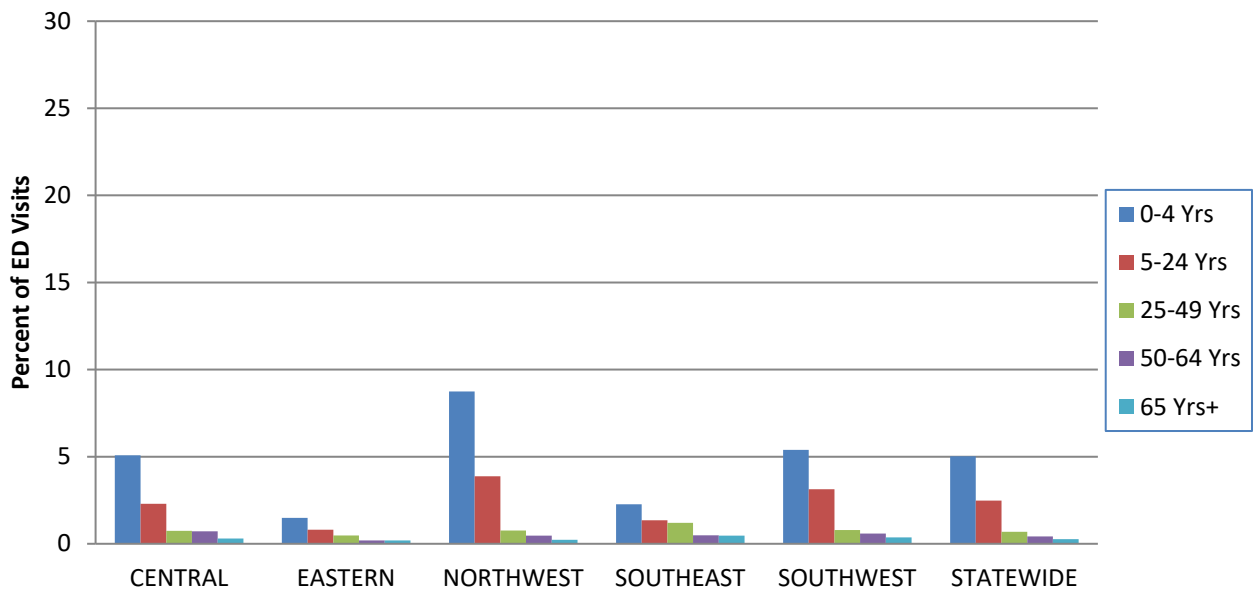- Influenza B
- Percent Positivity

Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC). 2022-2023 season-to-date through the week ending April 15, 2023 (Week 15).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

Legend:
- 2019-2020
- 2020-2021
- 2021-2022
- 2022-2023
- ESSENCE ILI Baseline*

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
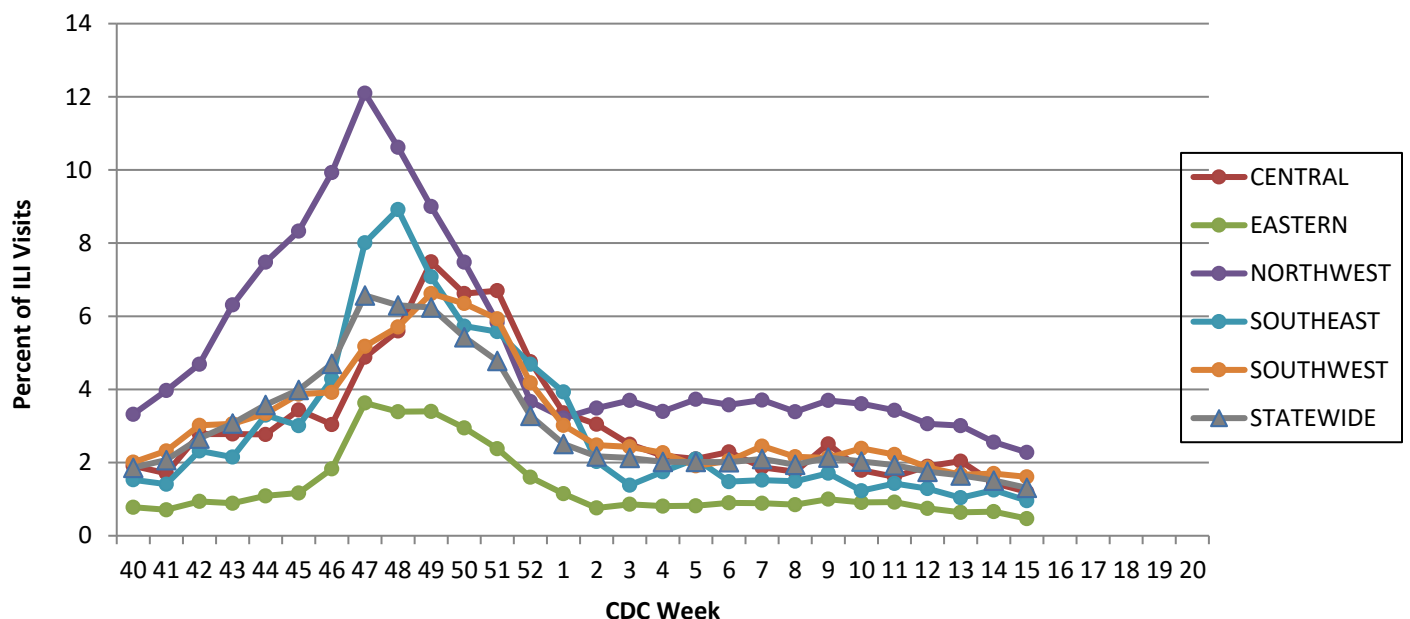
Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 15, 2023[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.
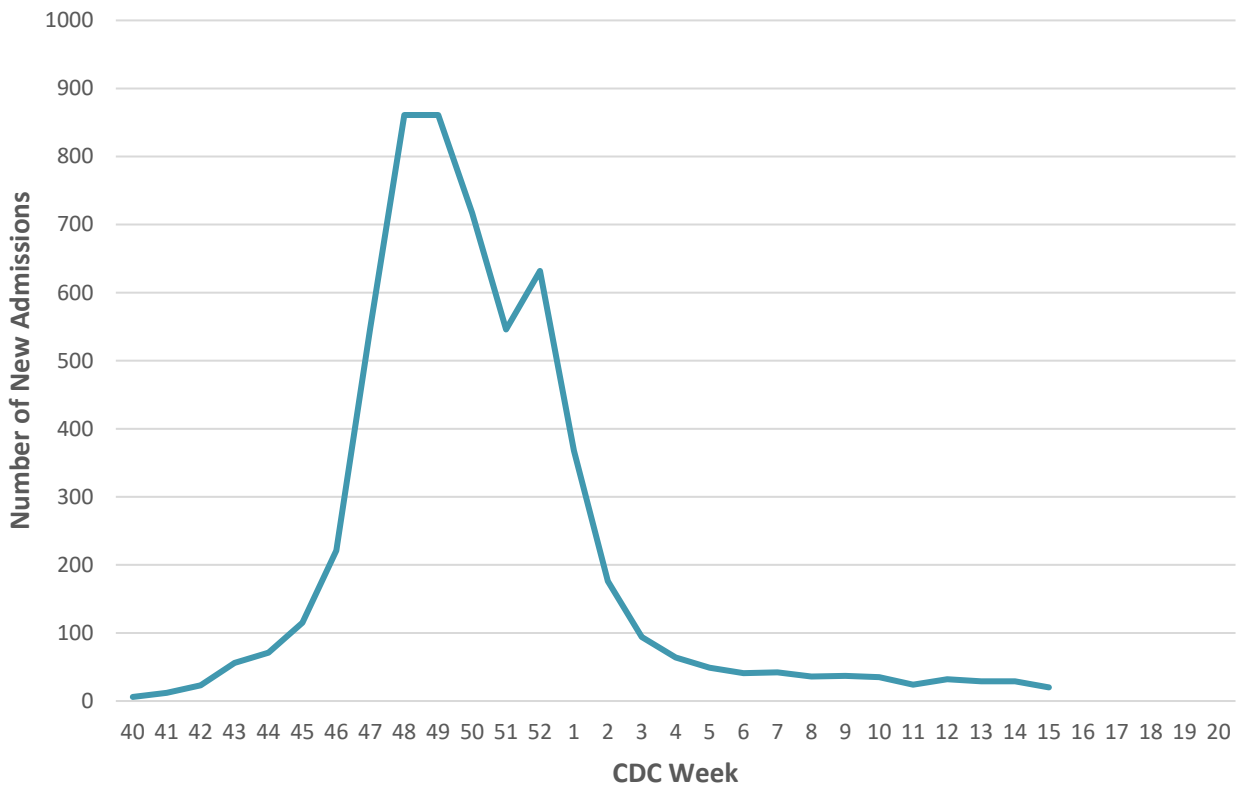
Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
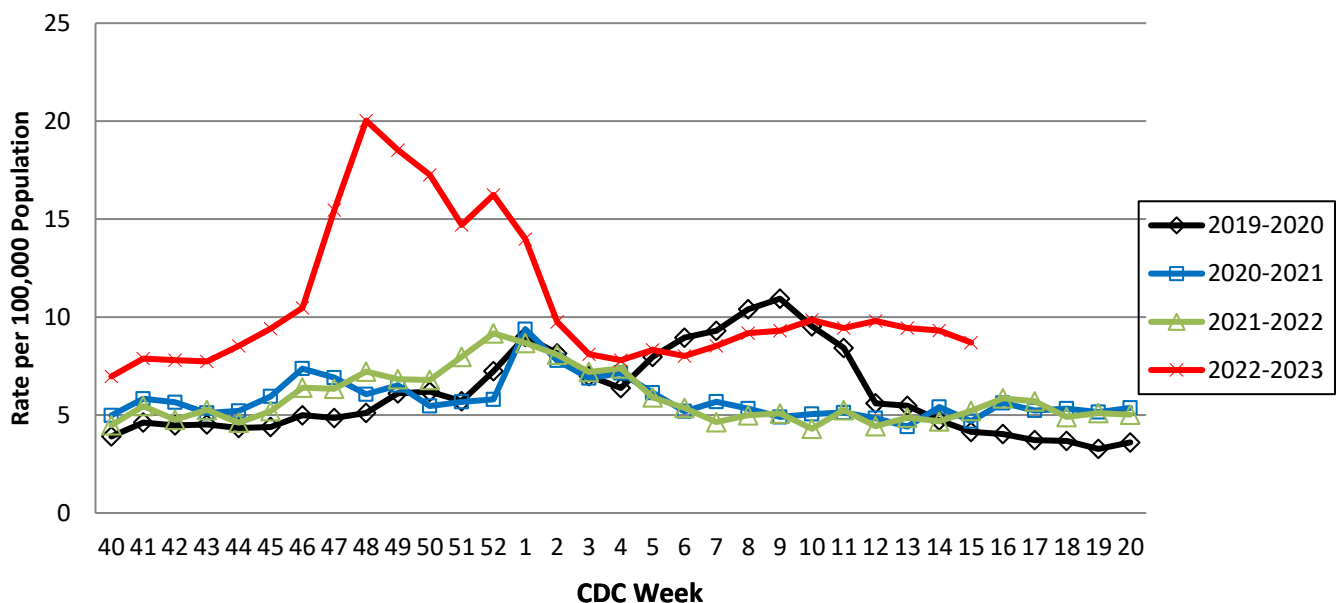[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

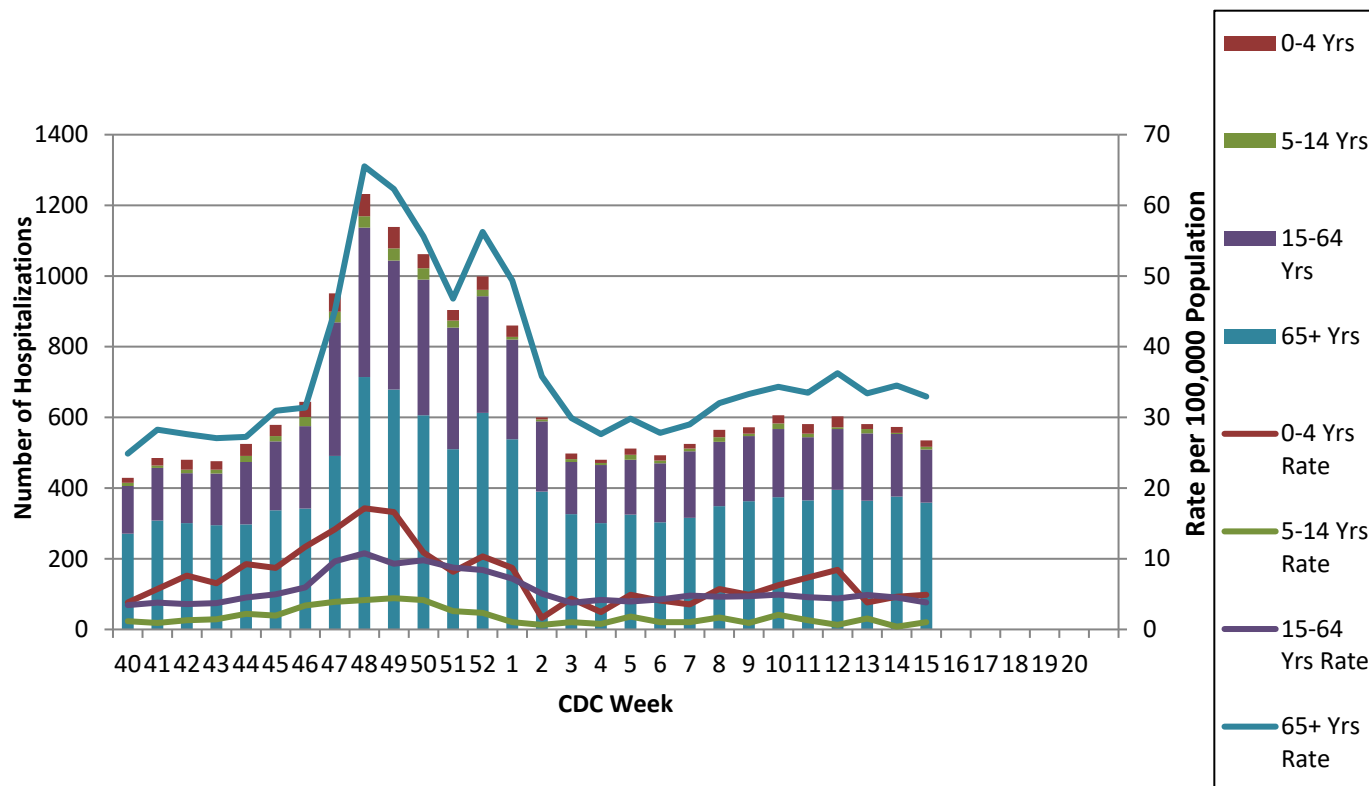**Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season**

Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov.
2022-2023 season-to-date through the week ending April 15, 2023 (Week 15).

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal.
Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 15, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 16: April 16, 2023 – April 22, 2023

All data are preliminary and may change as more reports are received.

Summary:

- Seasonal influenza activity in Missouri decreased to Sporadic[2] while the Influenza-like illness (ILI) activity in Missouri increased to Level 2 in the minimal category[3], respectively during Week 16.

- During Week 16 a total of 88 laboratory-positive[4] influenza cases (26 influenza A, 62 influenza B and 0 untyped) were reported. The influenza type for reported season-to-date cases includes 94.0% influenza A, 5.7% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 0.35% for Week 16.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE increased to 1.37% for Week 16 (Figure 6).[5]

- Two hundred thirty six influenza-associated deaths have been reported in Missouri as of Week 14 (week ending April 8, 2023).[6]

- Eleven influenza outbreaks and two influenza-associated school closures have been reported as of Week 16.

- Seasonal influenza activity continues to decline nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Sporadic is defined as: Small numbers of laboratory-confirmed influenza cases or a single laboratory-confirmed influenza outbreak has been reported, but there is no increase in cases of ILI.

[3]ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 16**

- **Reported Week-specific Rate per 100,000 Population, CDC Week 16**

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**

- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

**Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type,
Missouri, CDC Weeks 14-16 (April 16, 2023 – April 22, 2023)[*]**

Influenza Type	Week 14	Week 15	Week 16	2022-2023[*] Season-to-Date
Influenza A	63	51	26	101,226
Influenza B	93	75	62	6,101
Influenza Unknown Or Untyped	0	0	0	476
Total	156	126	88	107,803

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

**Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group,
Missouri, CDC Week 16 (April 16, 2023 – April 22, 2023)[*‡]**

Age Group	Week 16 Cases	Week 16 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	14	3.80	15,926	4,326.78
05-24	29	1.85	45,284	2,895.38
25-49	22	1.13	22,940	1,180.59
50-64	8	0.67	11,944	995.16
65+	15	1.41	11,708	1,102.41
Total	88	1.43	107,803	1,756.48

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 16 (April 16, 2023 – April 22, 2023)[*‡]
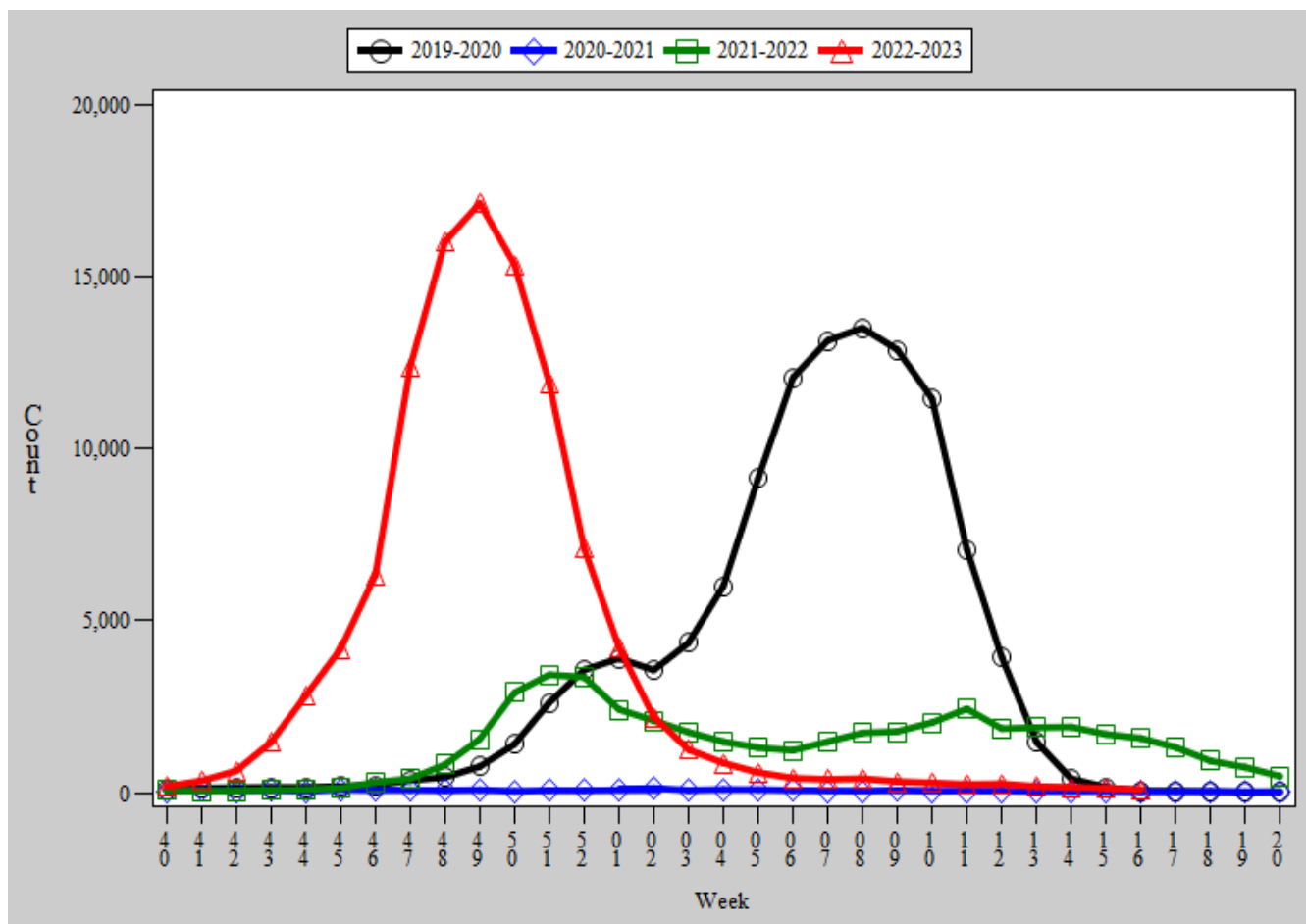
Region	Week 16 Cases	Week 16 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	29	4.30	11,257	1,668.15
Eastern	24	1.06	30,012	1,323.40
Northwest	14	0.86	30,889	1,887.23
Southeast	11	2.54	12,467	2,882.96
Southwest	10	0.95	23,178	2,206.10
Total	88	1.43	107,803	1,756.48

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
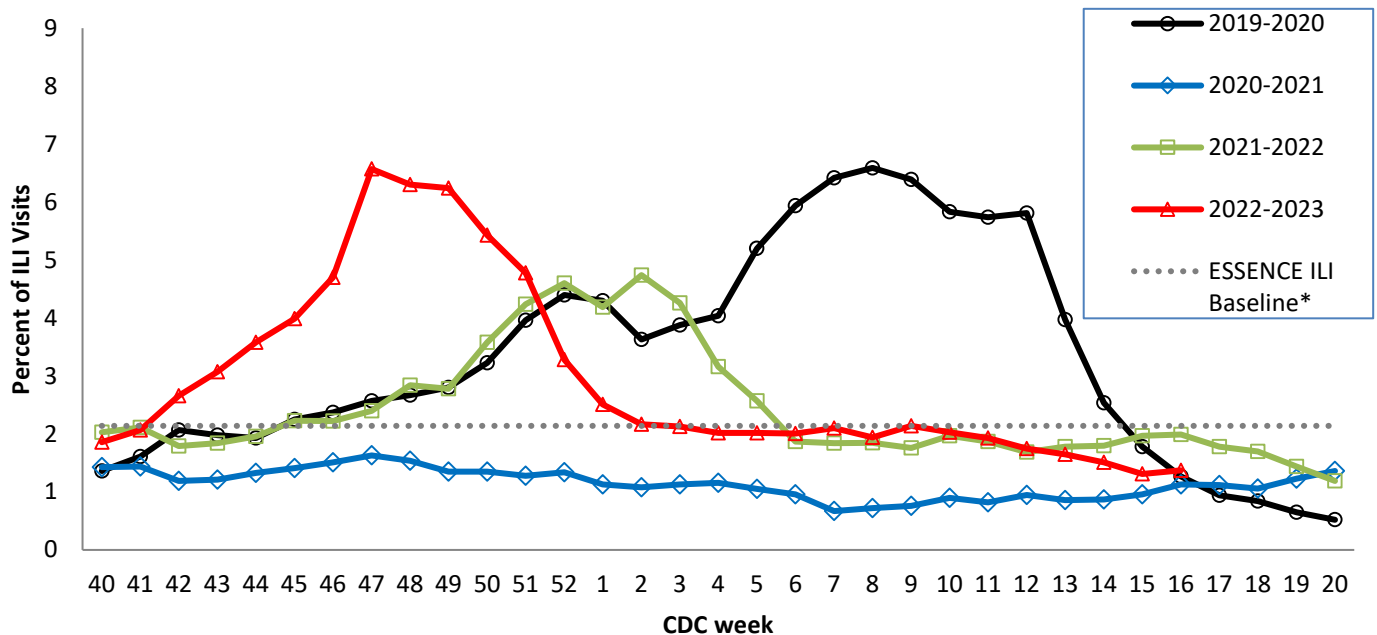[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*.]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending April 22, 2023 (Week 16). .Data Source: Missouri Health Information Surveillance System (WebSurv)

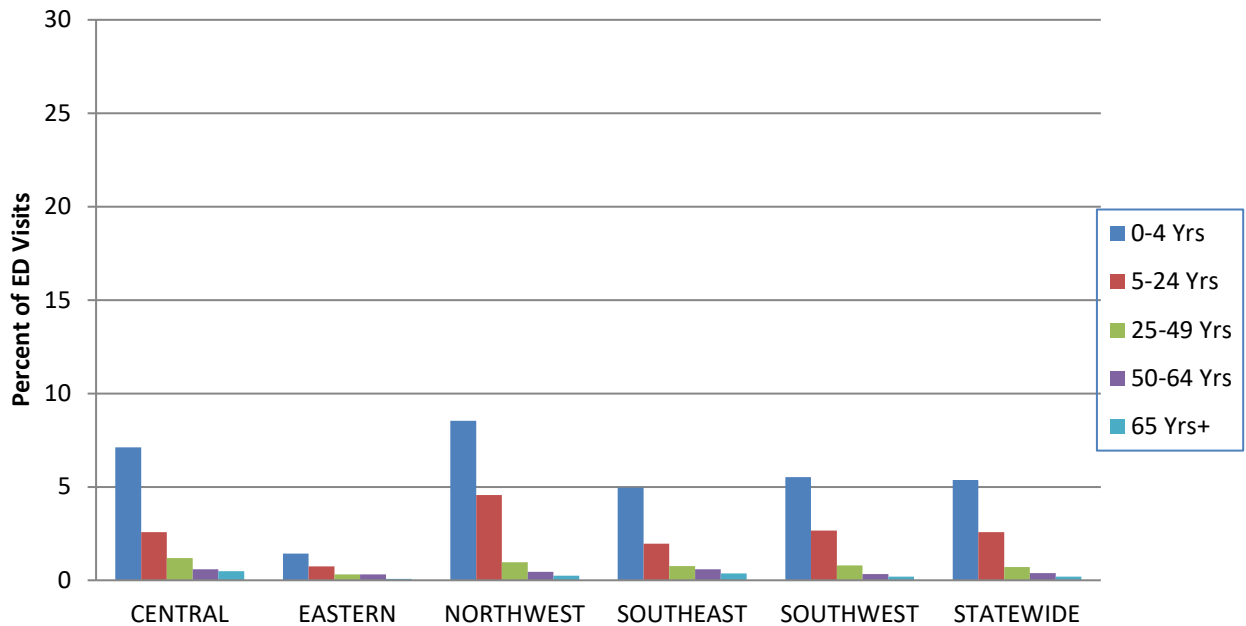## Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri
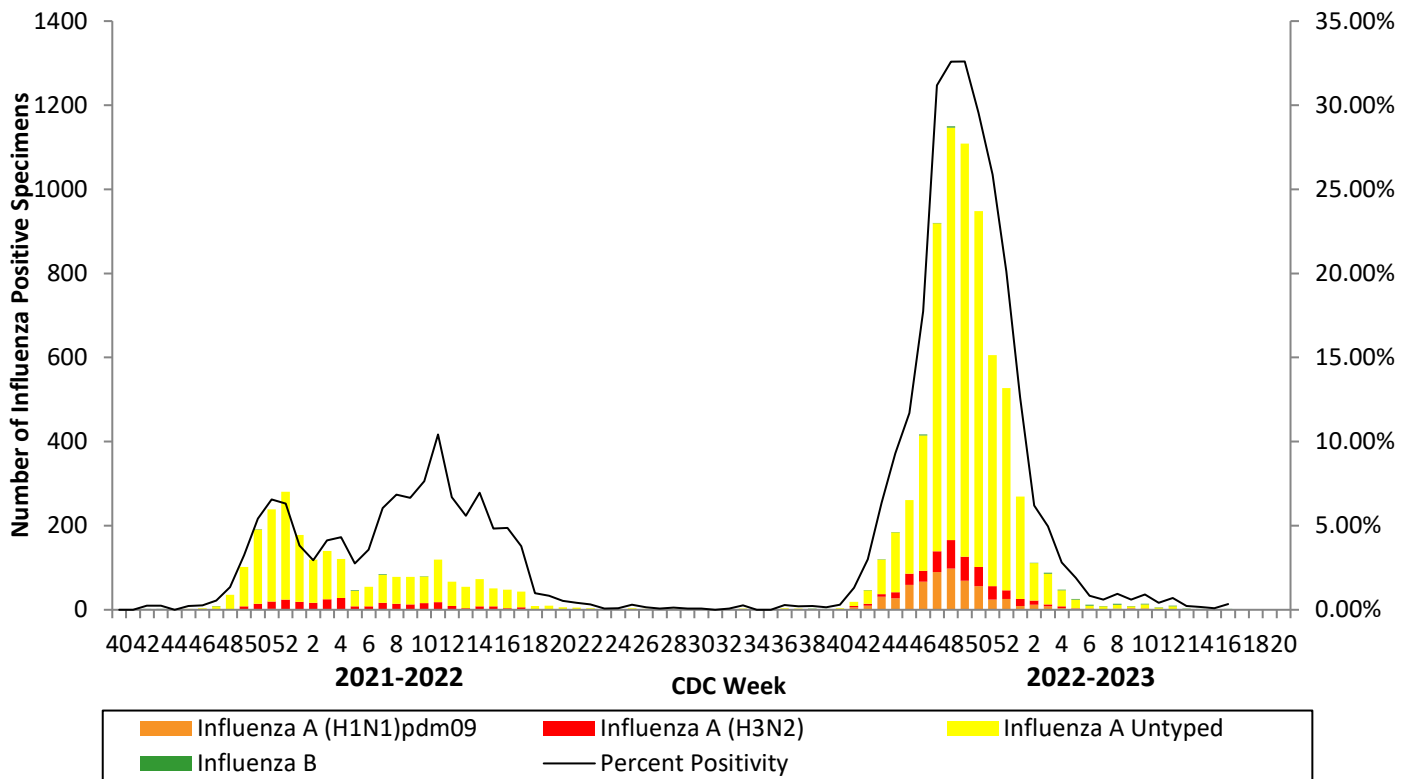
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
2022-2023 season-to-date through the week ending April 22, 2023 (Week 16).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
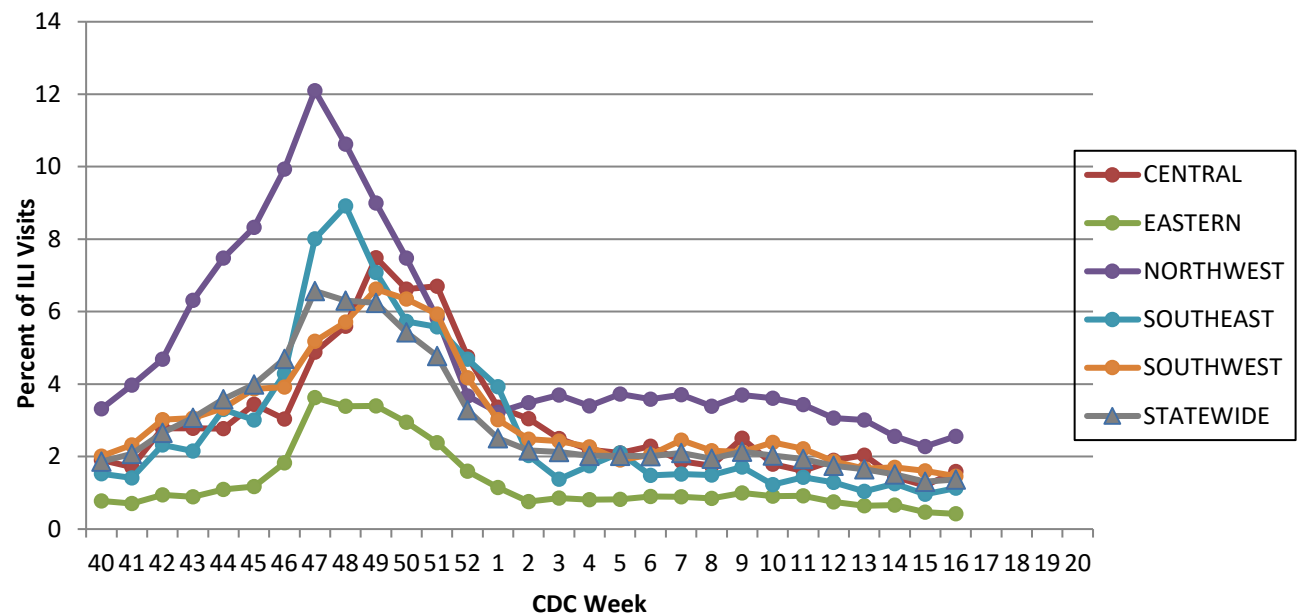
Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 16, 2023[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.
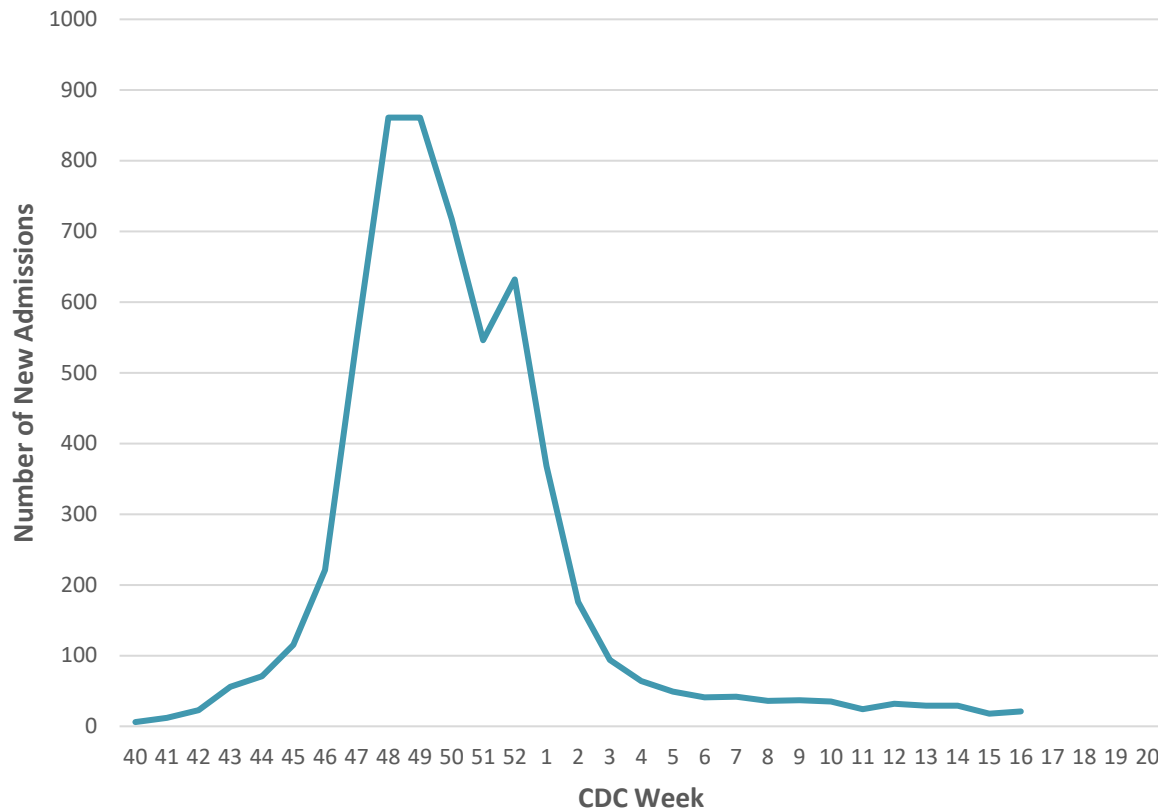
Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
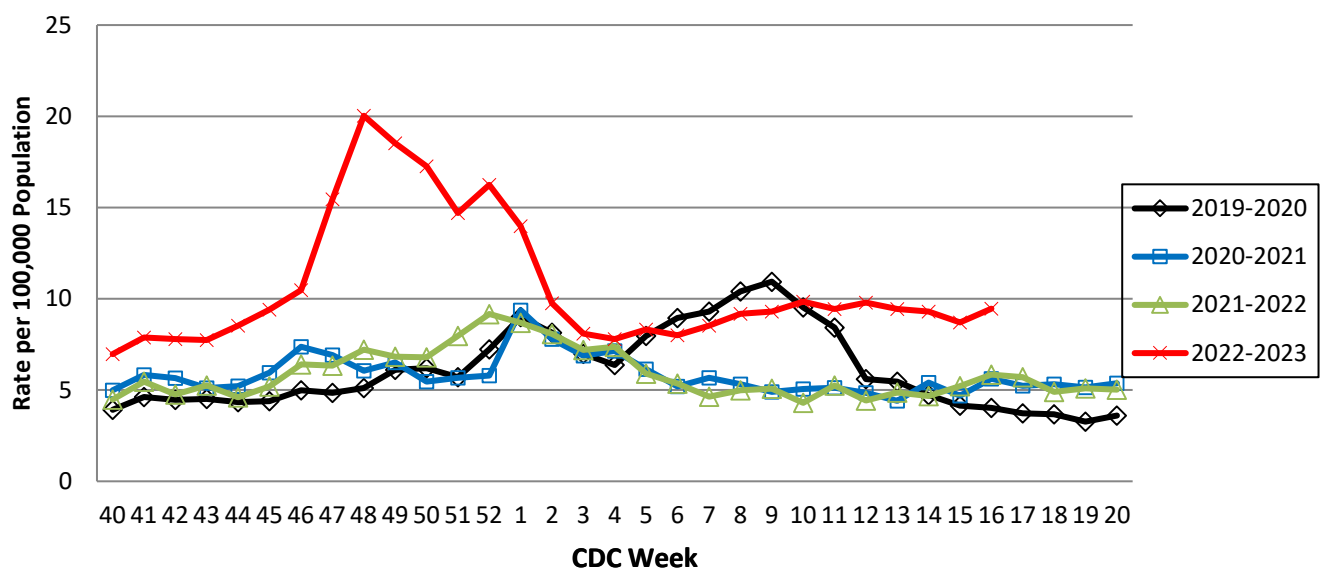[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

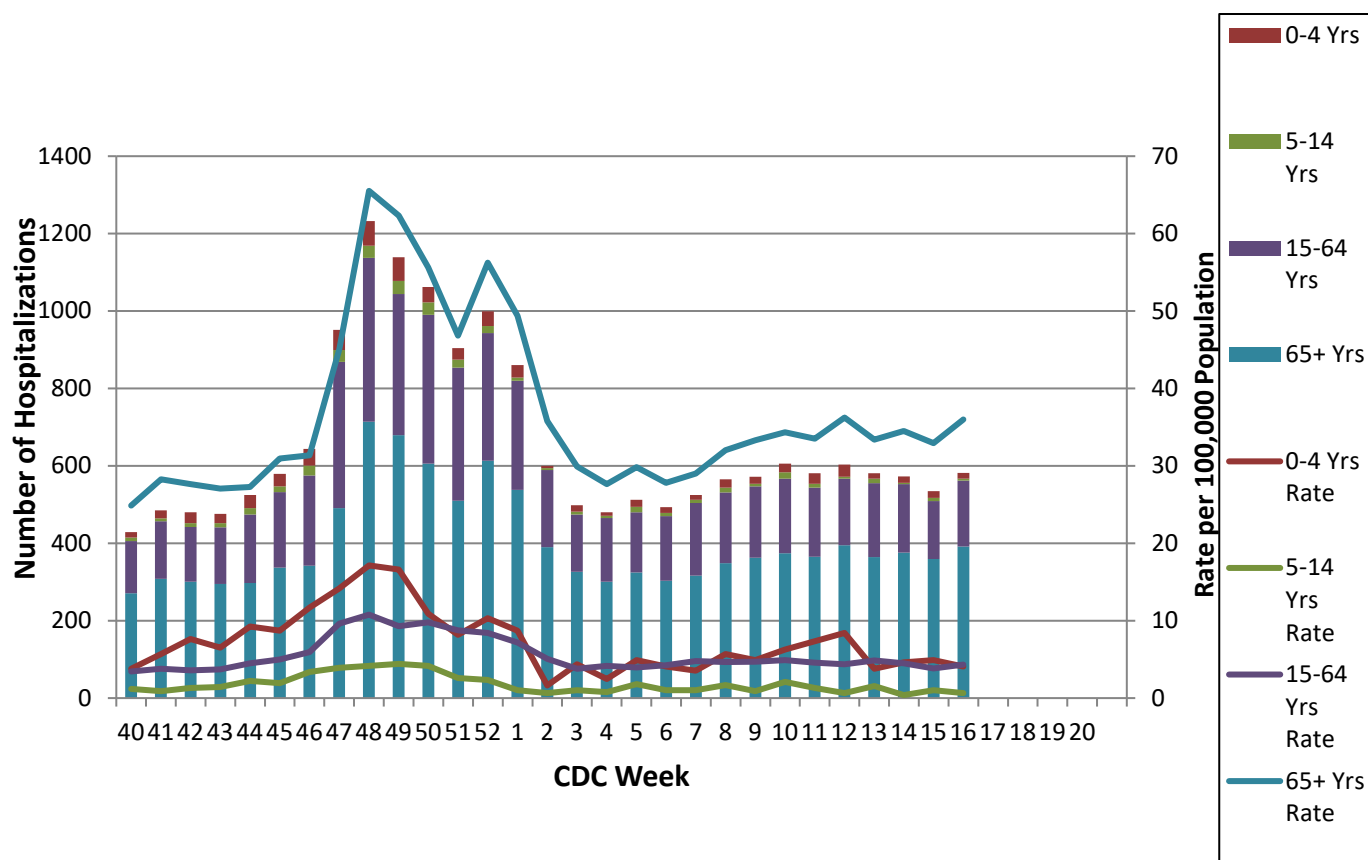**Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season**

Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov.
2022-2023 season-to-date through the week ending April 22, 2023 (Week 16).

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal.
Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).

Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 16, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
https://www.who.int/teams/global-influenza-programme/surveillance-and-monitoring/influenza-updates

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 17: April 23, 2023 – April 29, 2023

All data are preliminary and may change as more reports are received.

Summary:

- Seasonal influenza activity and the Influenza-like illness (ILI) activity in Missouri remained Sporadic[2] and Level 2 in the minimal category[3], respectively during Week 17.

- During Week 17 a total of 113 laboratory-positive[4] influenza cases (40 influenza A, 72 influenza B and 1 untyped) were reported. The influenza type for reported season-to-date cases includes 94.0% influenza A, 5.7% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 0.39% for Week 17. The number of Missouri facilities reporting to NREVSS for week 17 was limited.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE increased to 1.45% for Week 17 (Figure 6).[5]

- Two hundred thirty nine influenza-associated deaths have been reported in Missouri as of Week 15 (week ending April 15, 2023).[6]

- Twelve influenza outbreaks and two influenza-associated school closures have been reported as of Week 17.

- Seasonal influenza activity continues to decline nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Sporadic is defined as: Small numbers of laboratory-confirmed influenza cases or a single laboratory-confirmed influenza outbreak has been reported, but there is no increase in cases of ILI.

[3]ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 17**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 17**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 15-17 (April 9, 2023 – April 29, 2023)[*]

Influenza Type	Week 15	Week 16	Week 17	2022-2023[*] Season-to-Date
Influenza A	52	37	40	101,279
Influenza B	81	74	72	6,201
Influenza Unknown Or Untyped	0	4	1	481
Total	133	115	113	107,961

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 17 (April 23, 2023 – April 29, 2023)[*‡]

Age Group	Week 17 Cases	Week 17 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	14	3.80	15,941	4,330.85
05-24	36	2.30	45,329	2,898.26
25-49	35	1.80	22,990	1,183.17
50-64	9	0.75	11,958	996.32
65+	19	1.79	11,742	1,105.61
Total	113	1.84	107,961	1,756.06

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 17 (April 23, 2023 – April 29, 2023)[*‡]
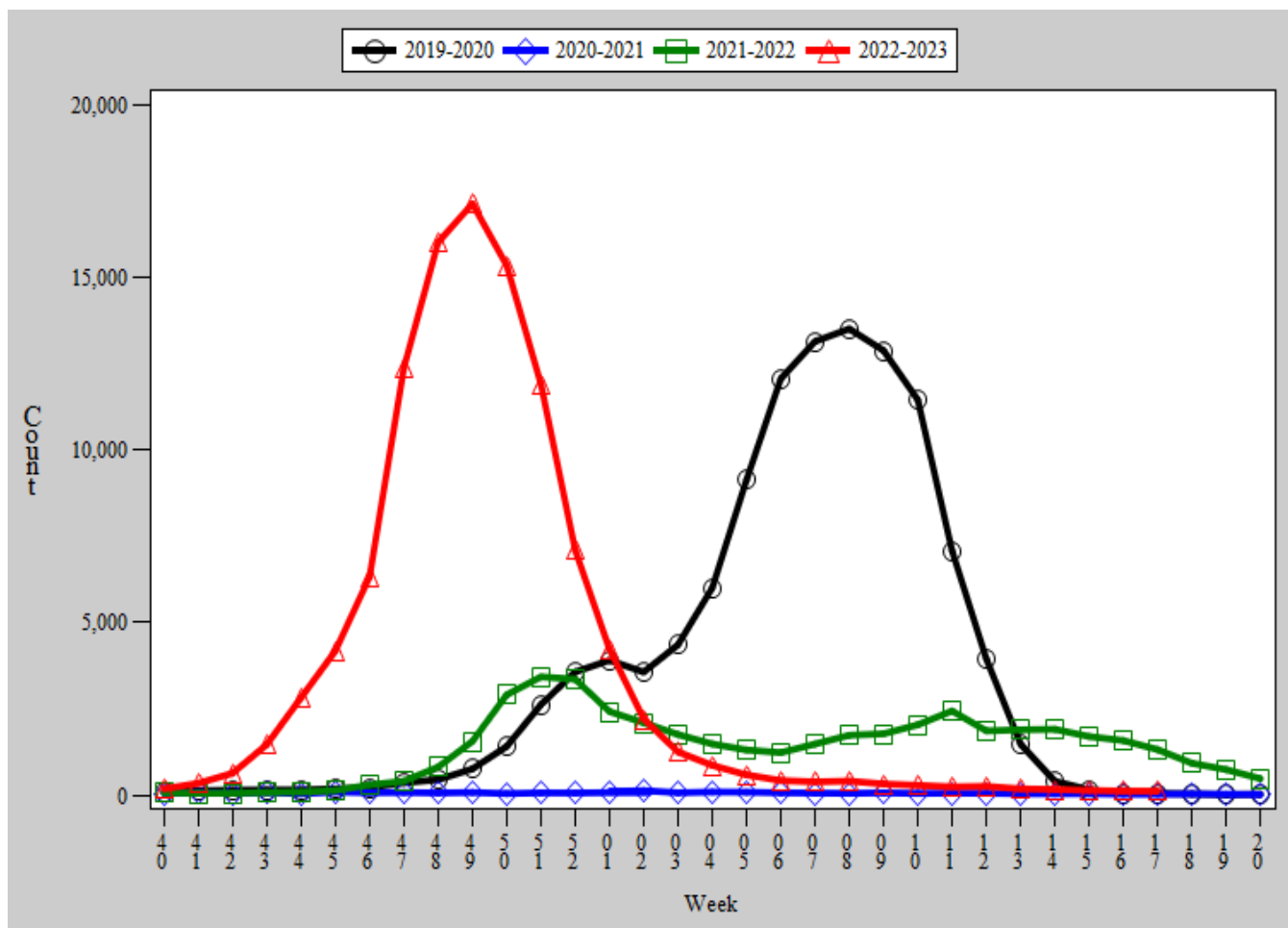
Region	Week 17 Cases	Week 17 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	24	3.56	11,283	1,672.00
Eastern	27	1.19	30,045	1,324.86
Northwest	17	1.04	30,922	1,889.24
Southeast	16	3.70	12,498	2,890.13
Southwest	29	2.76	23,213	2,209.43
Total	113	1.84	107,961	1,759.06

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
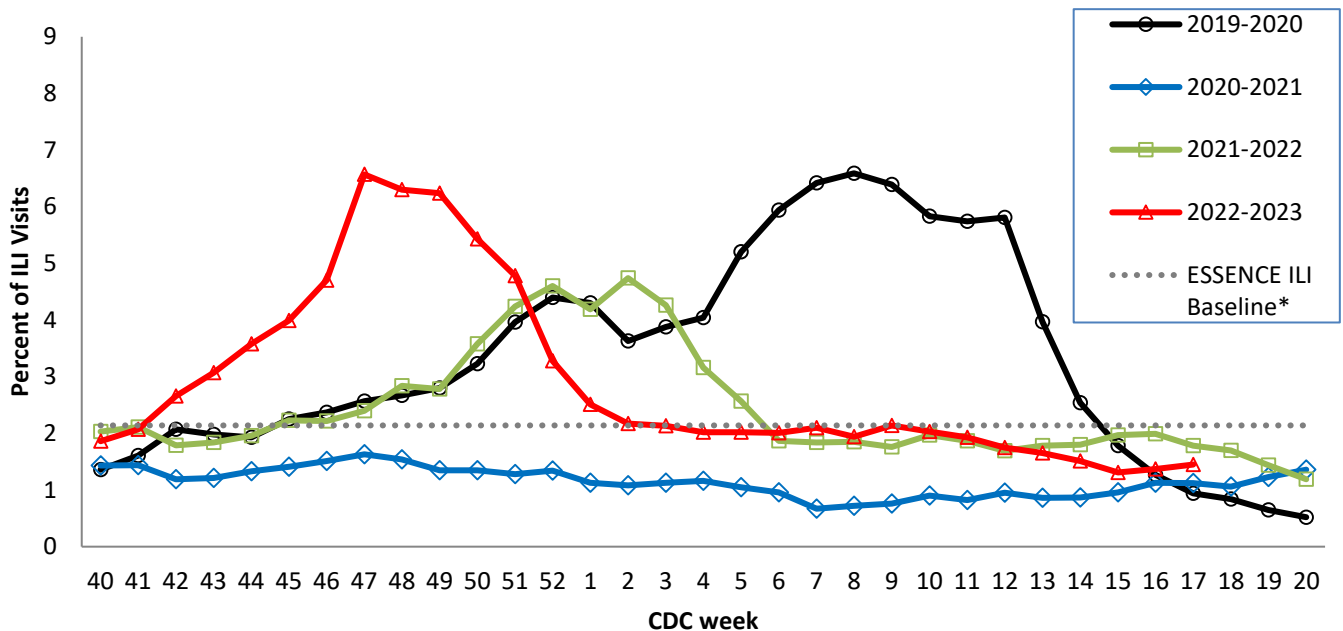[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*·]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending April 29, 2023 (Week 17). .Data Source: Missouri Health Information Surveillance System (WebSurv)

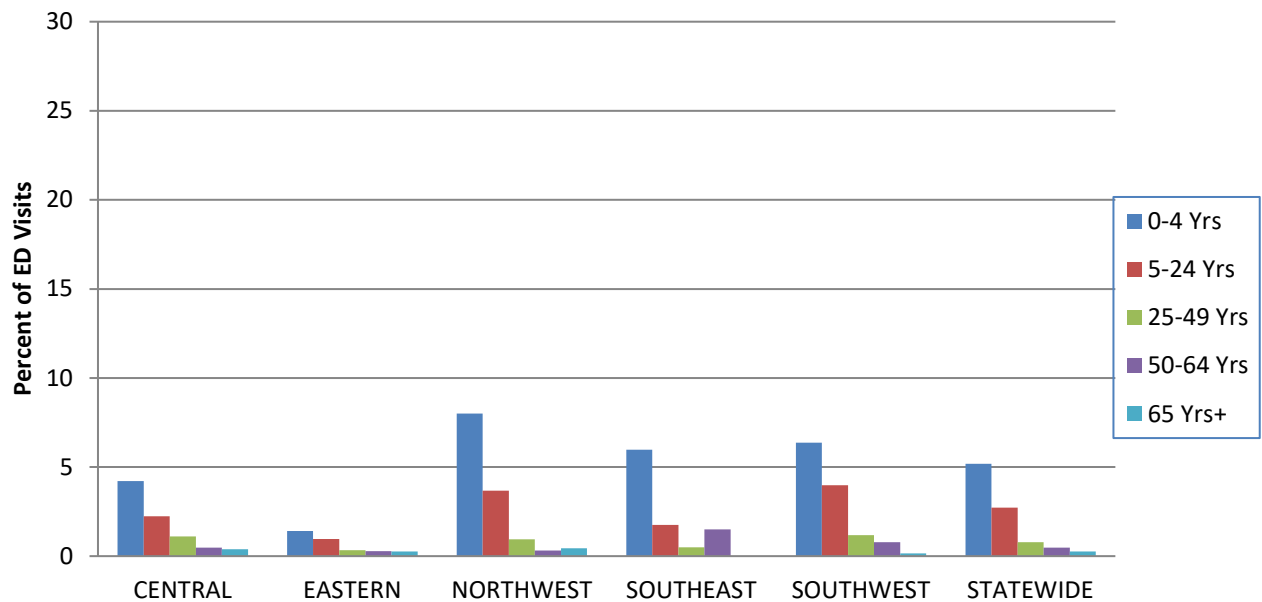**Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri**
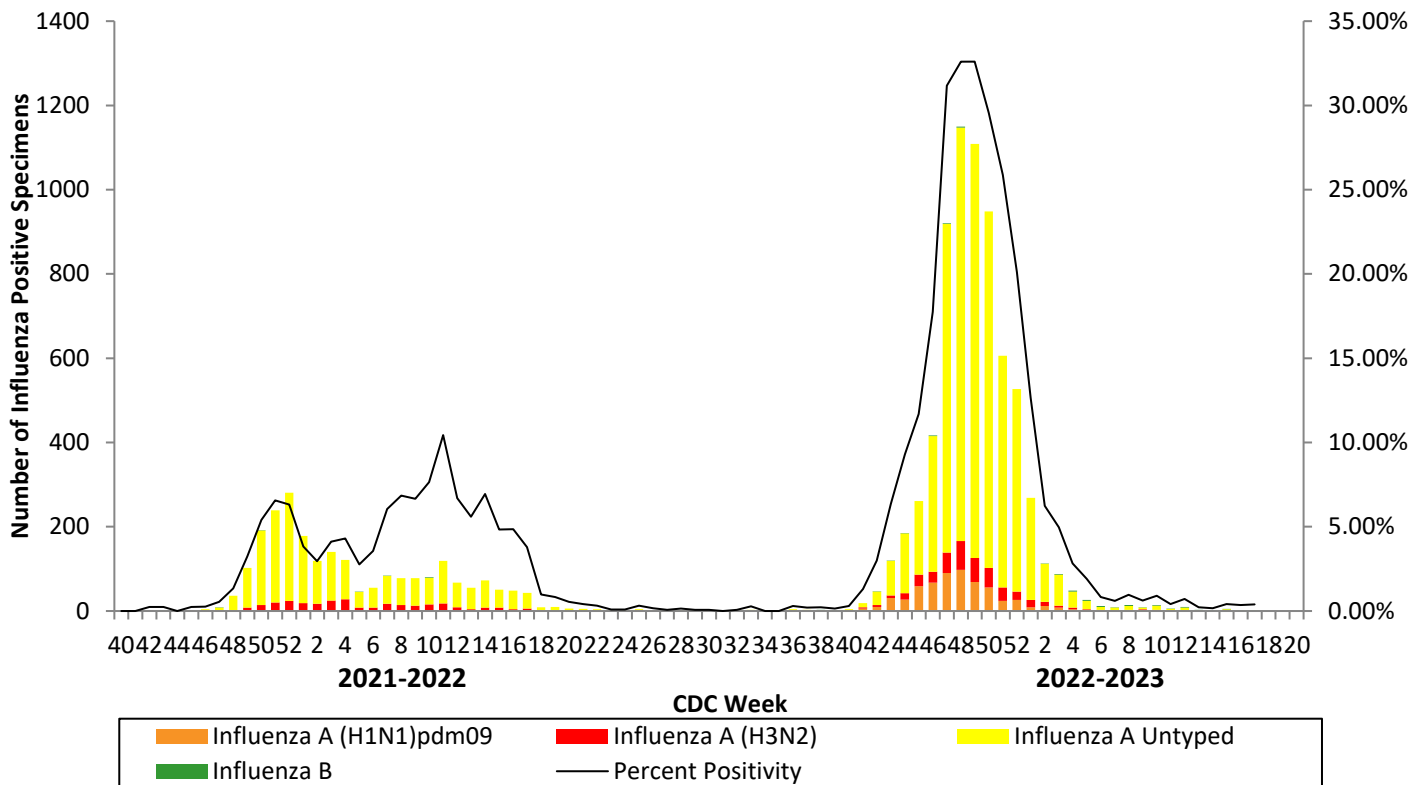
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
2022-2023 season-to-date through the week ending April 29, 2023 (Week 17).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
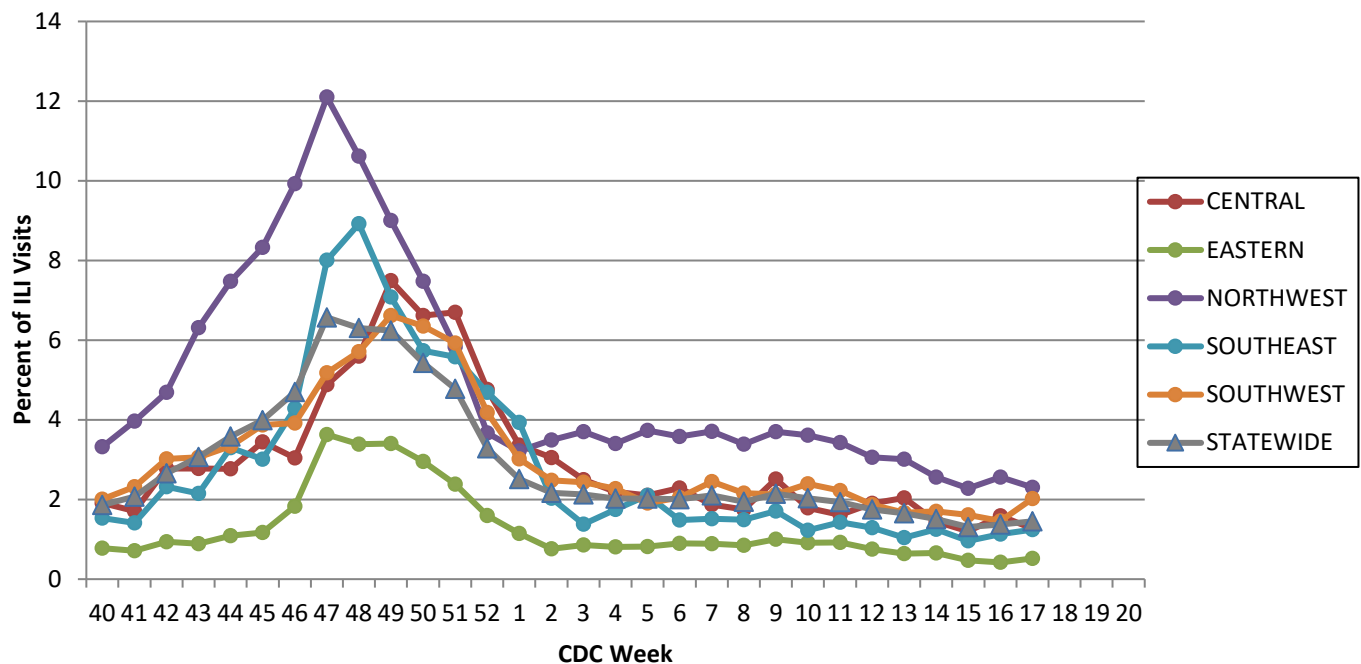
Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 17, 2023[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.
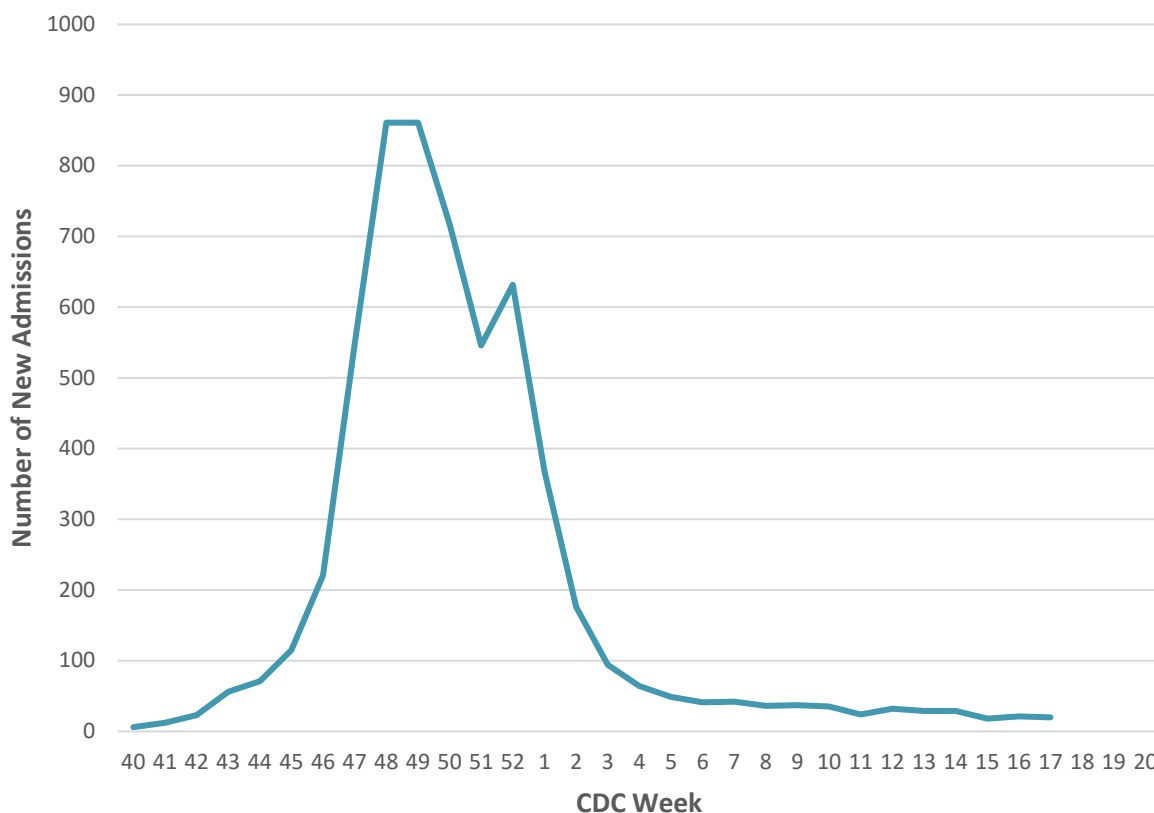
Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season
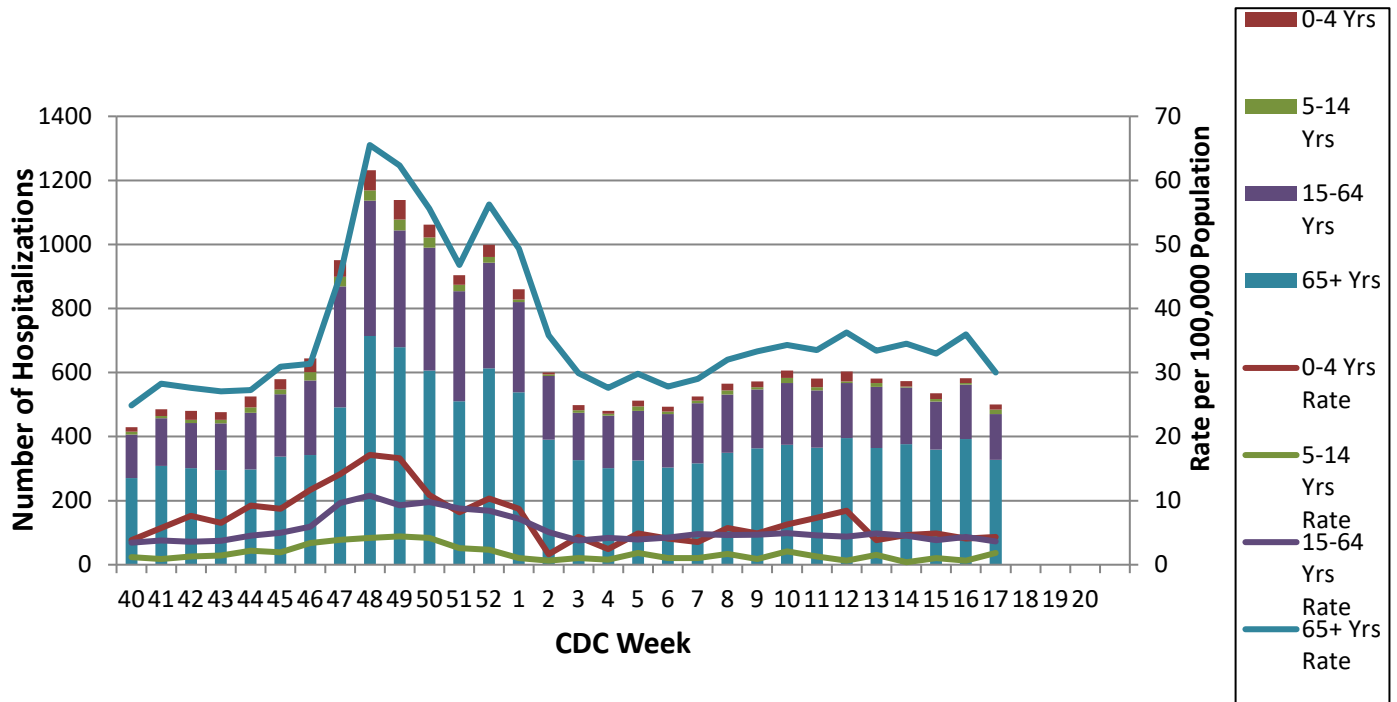

Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov.
2022-2023 season-to-date through the week ending April 29, 2023 (Week 17).

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons
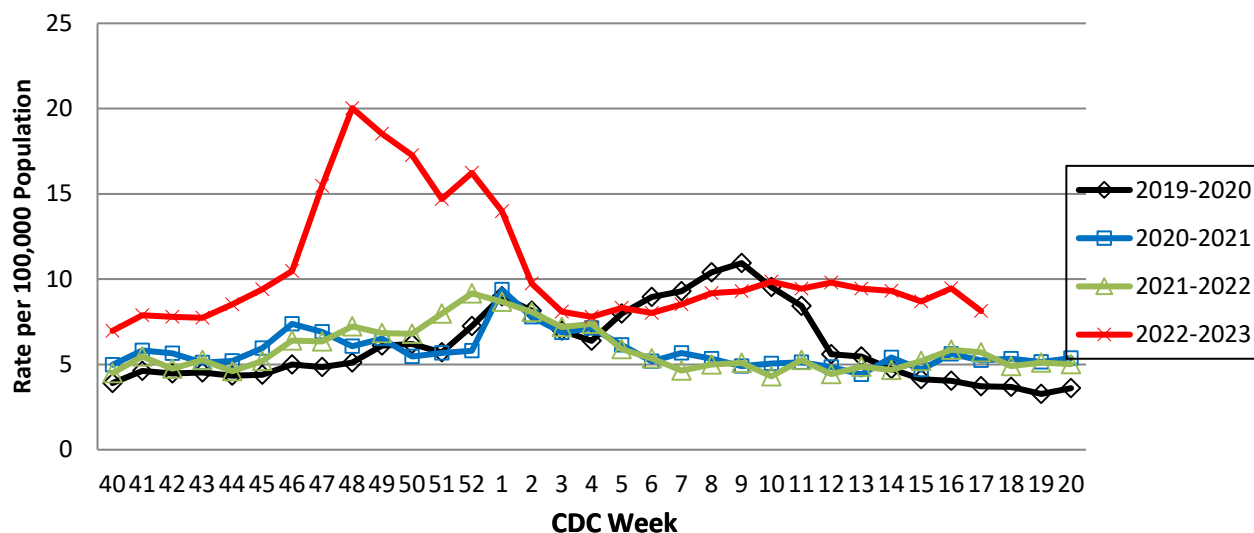
Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal.
Population data from Missouri Census Data Center 2017.

Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 17, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
https://www.who.int/teams/global-influenza-programme/surveillance-and-monitoring/influenza-updates

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 18: April 30, 2023 – May 6, 2023

All data are preliminary and may change as more reports are received.

Summary:

- Seasonal influenza activity and the Influenza-like illness (ILI) activity in Missouri remained Sporadic[2] and Level 2 in the minimal category[3], respectively during Week 18.

- During Week 18 a total of 87 laboratory-positive[4] influenza cases (33 influenza A, 53 influenza B and 1 untyped) were reported. The influenza type for reported season-to-date cases includes 93.7% influenza A, 5.8% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 0.41% for Week 18. The number of Missouri facilities reporting to NREVSS for Week 18 was limited.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE decreased to 1.36% for Week 18 (Figure 6).[5]

- Two hundred forty one influenza-associated deaths have been reported in Missouri as of Week 16 (week ending April 22, 2023).[6]

- Twelve influenza outbreaks and two influenza-associated school closures have been reported as of Week 18.

- Seasonal influenza activity continues to decline nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Sporadic is defined as: Small numbers of laboratory-confirmed influenza cases or a single laboratory-confirmed influenza outbreak has been reported, but there is no increase in cases of ILI.

[3] ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 18**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 18**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 16-18 (April 16, 2023 – May 6, 2023)[*]

Influenza Type	Week 16	Week 17	Week 18	2022-2023[*] Season-to-Date
Influenza A	40	50	33	101,325
Influenza B	78	88	53	6,278
Influenza Unknown Or Untyped	4	1	1	482
Total	122	139	87	108,085

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 18 (April 30, 2023 – May 6, 2023)[*‡]

Age Group	Week 18 Cases	Week 18 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	11	2.99	15,957	4,335.20
05-24	29	1.85	45,368	2,900.75
25-49	20	1.03	23,025	1,184.97
50-64	12	1.00	11,976	997.82
65+	15	1.41	11,758	1,107.12
Total	87	1.42	108,085	1,761.08

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 18 (April 30, 2023 – May 6, 2023)[*‡]
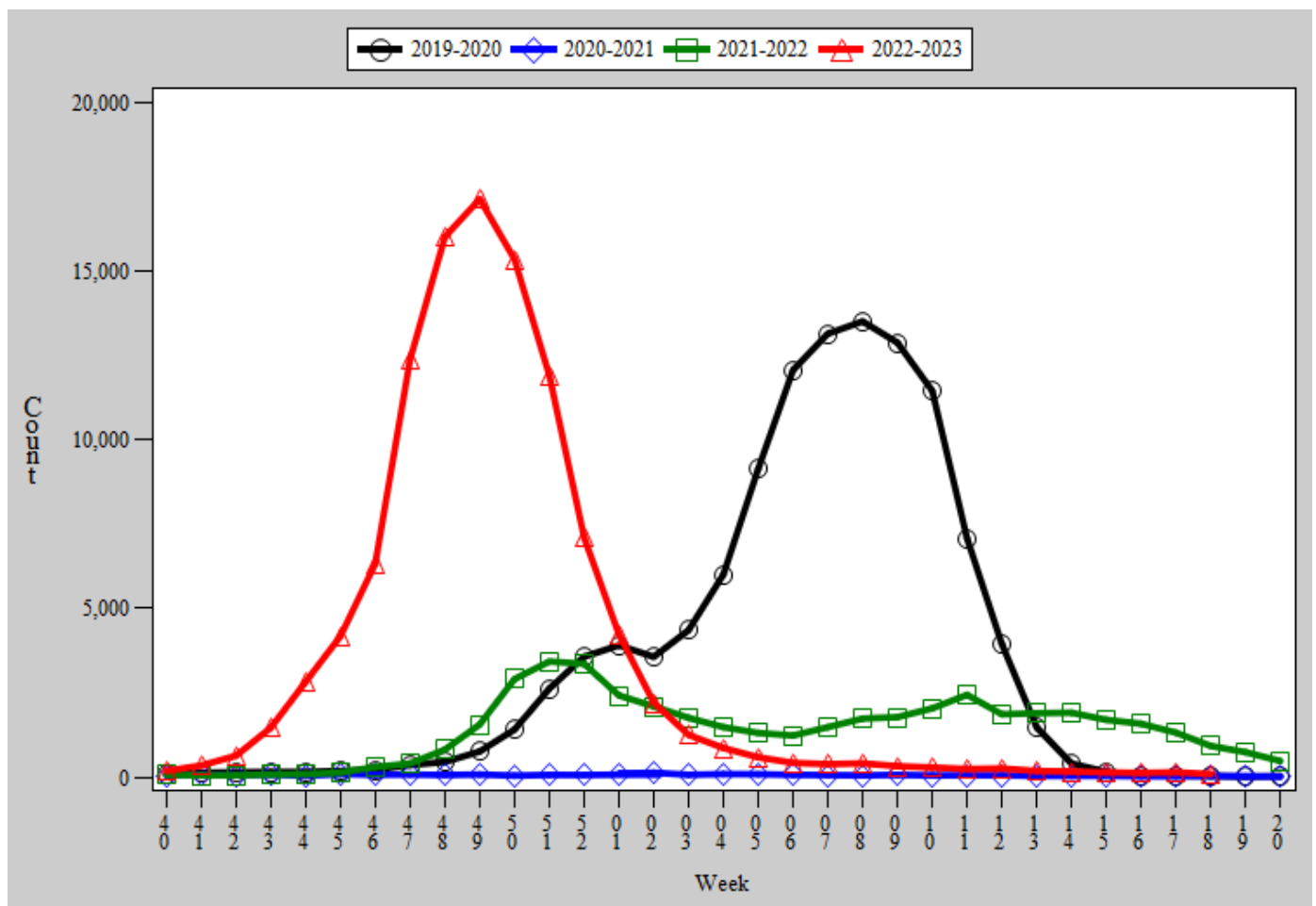
Region	Week 18 Cases	Week 18 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	31	4.59	11,321	1,677.64
Eastern	19	0.84	30,064	1,325.70
Northwest	7	0.43	30,938	1,890.22
Southeast	10	2.31	12,509	2,892.67
Southwest	20	1.90	23,253	2,213.24
Total	87	1.42	108,085	1,761.08

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
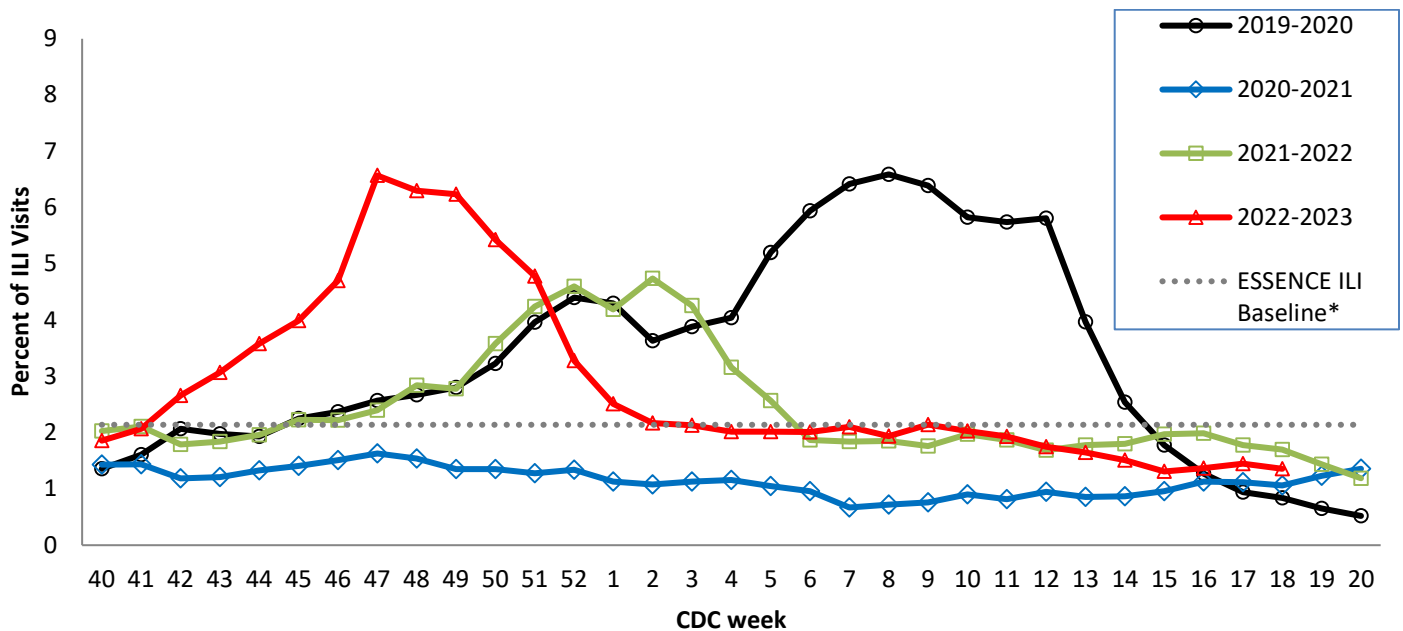[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
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[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending May 6, 2023 (Week 18). .Data Source: Missouri Health Information Surveillance System (WebSurv)

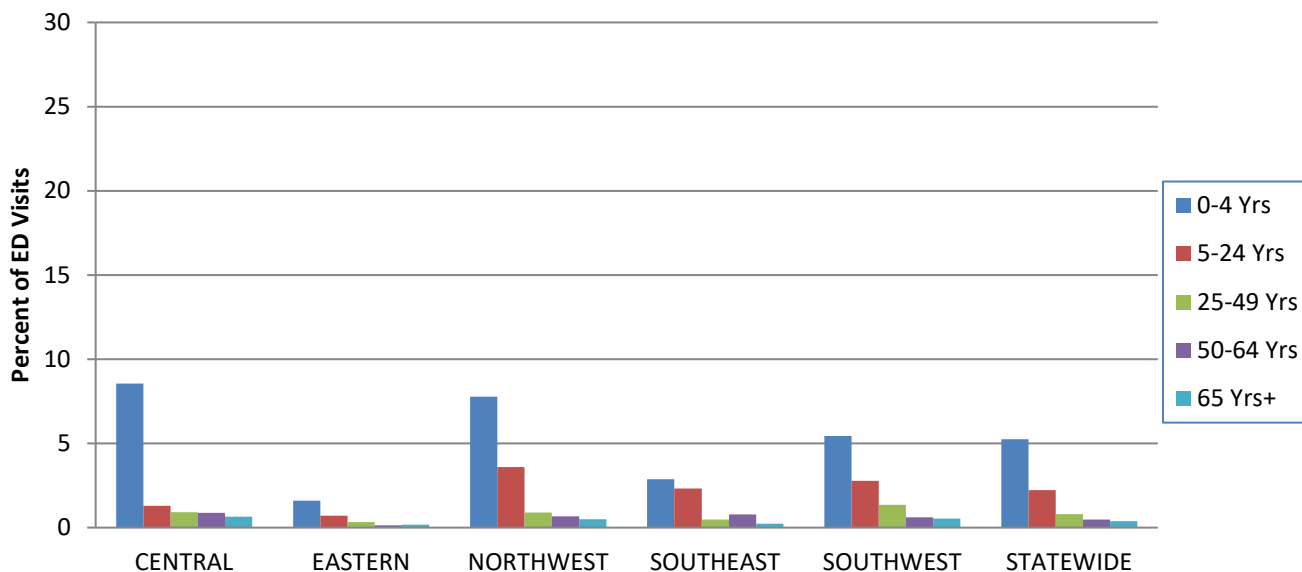# Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri
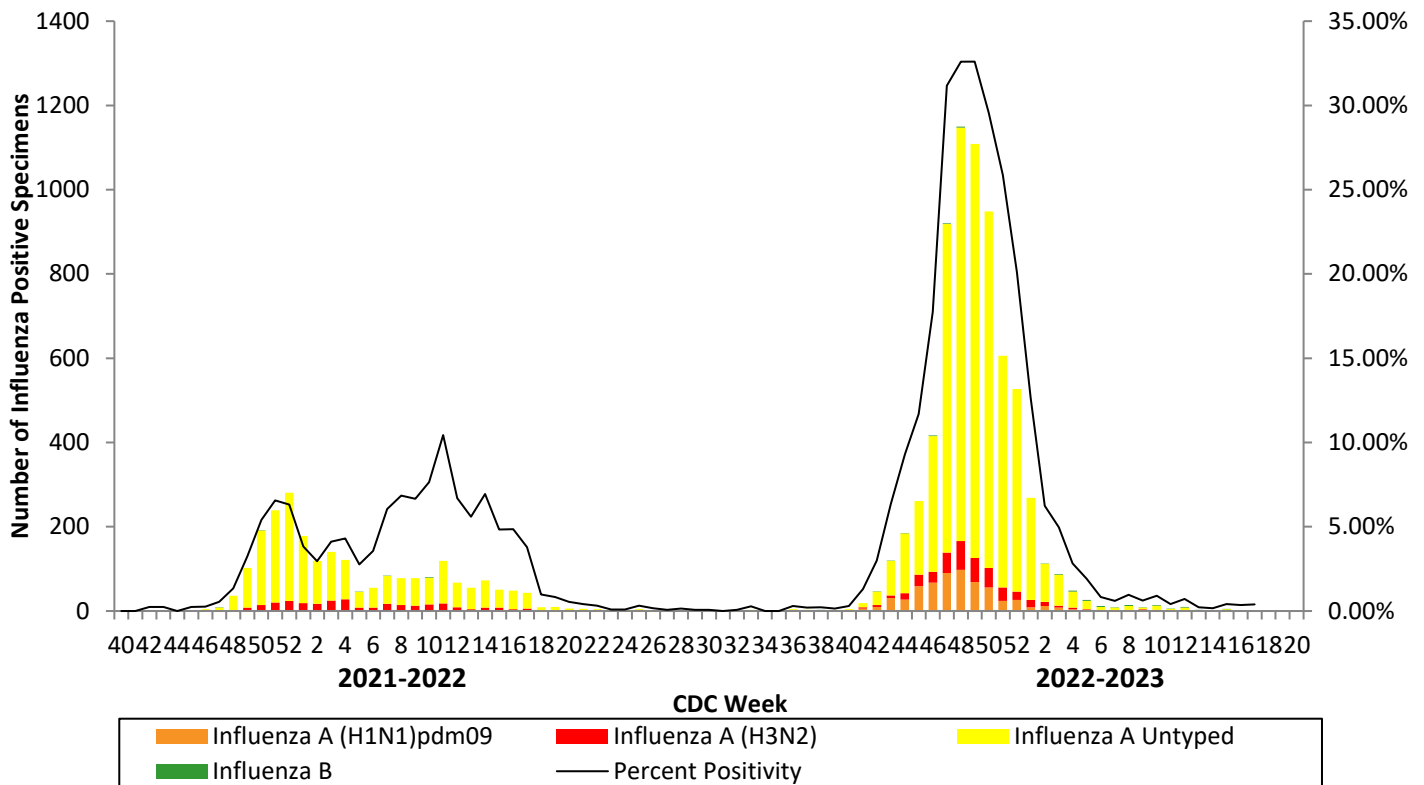
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC). 2022-2023 season-to-date through the week ending May 6, 2023 (Week 18).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

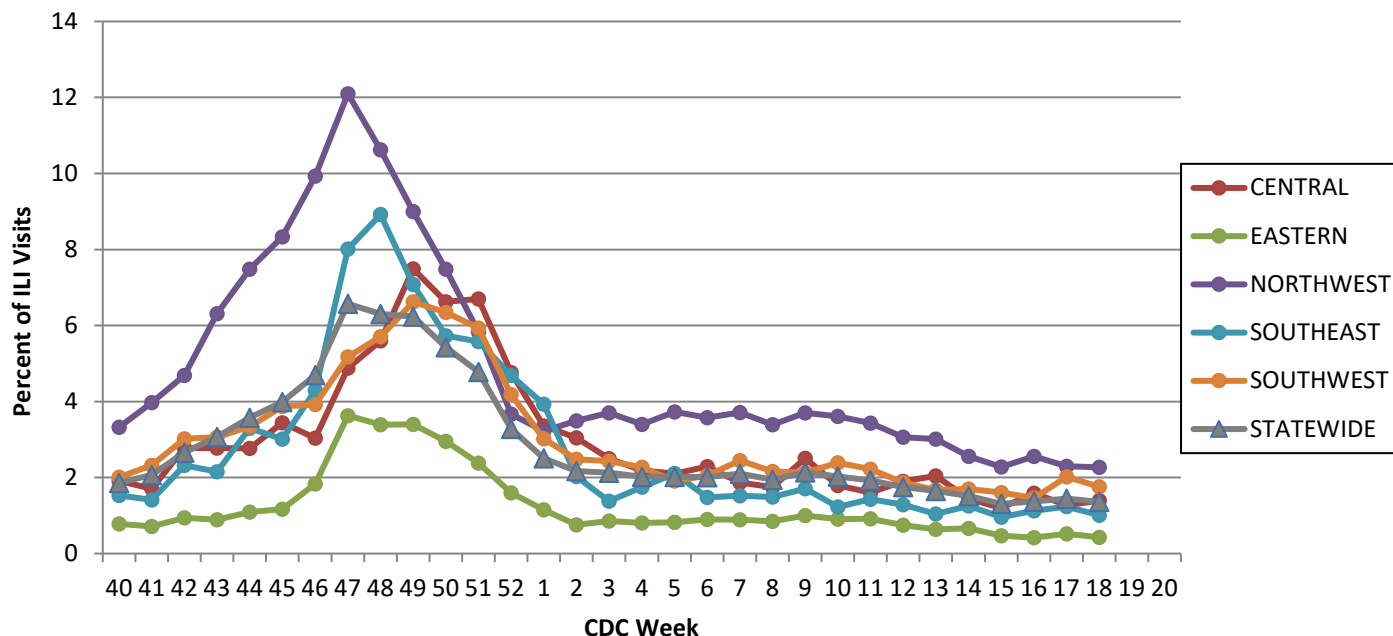*The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 18, 2023[*]
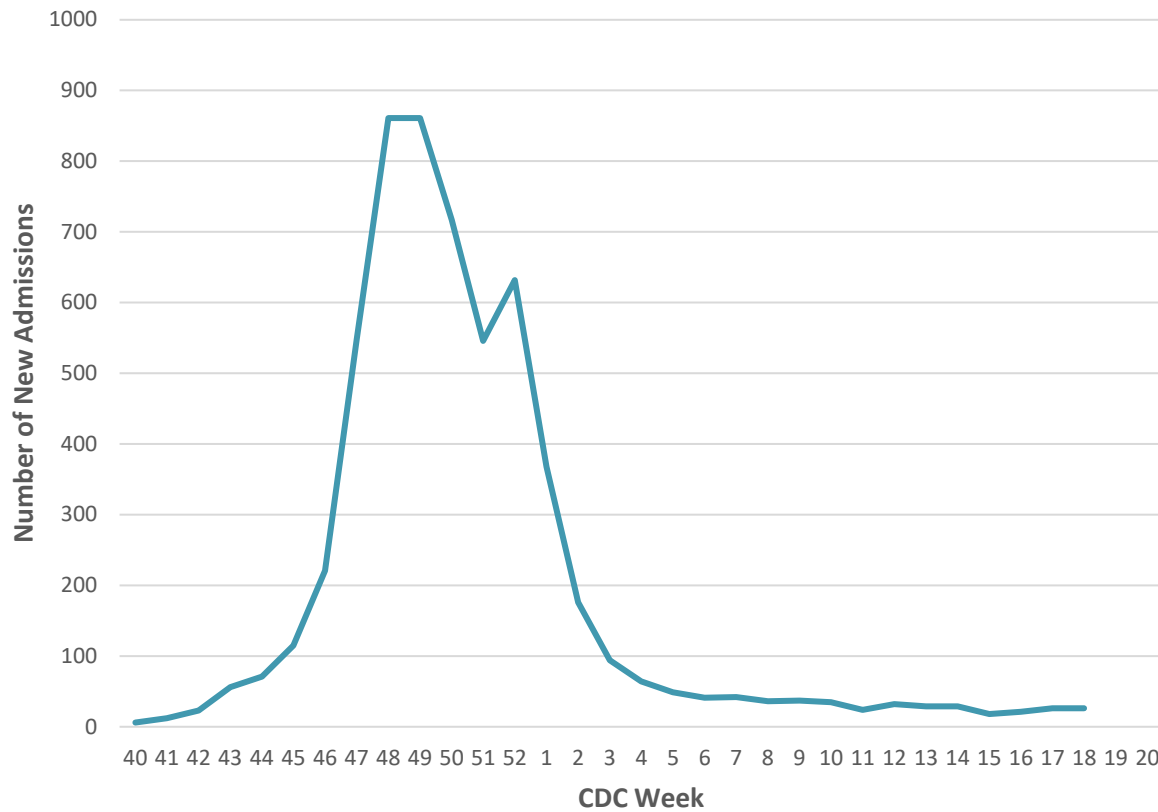

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]
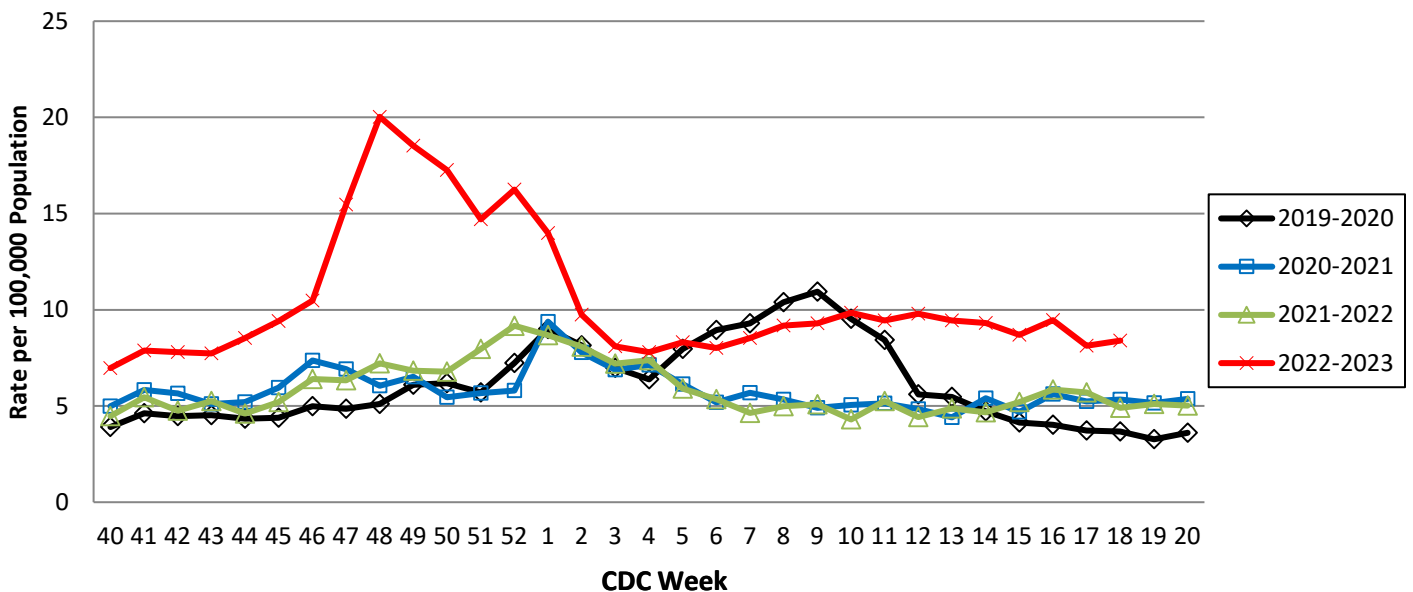

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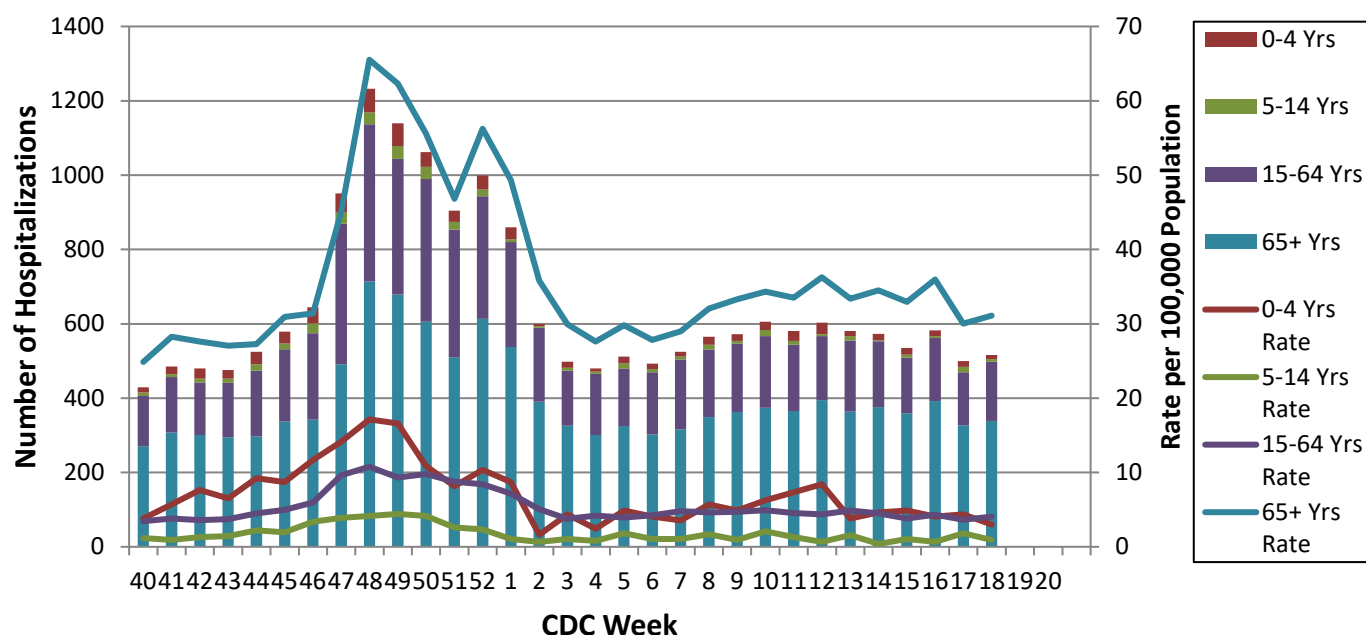**Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season**

Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov. 2022-2023 season-to-date through the week ending May 6, 2023 (Week 18).

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal. Population data from Missouri Census Data Center 2017.

Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 18, 2022-2023 Influenza Season

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Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
https://www.who.int/teams/global-influenza-programme/surveillance-and-monitoring/influenza-updates

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 19: May 7, 2023 – May 13, 2023

All data are preliminary and may change as more reports are received.

Summary:

- Seasonal influenza activity and the Influenza-like illness (ILI) activity in Missouri remained Sporadic[2] and Level 2 in the minimal category[3], respectively during Week 19.

- During Week 19 a total of 92 laboratory-positive[4] influenza cases (38 influenza A, 54 influenza B and 0 untyped) were reported. The influenza type for reported season-to-date cases includes 93.7% influenza A, 5.9% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 0.33% for Week 19.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE decreased to 1.29% for Week 19 (Figure 6).[5]

- Two hundred forty four influenza-associated deaths have been reported in Missouri as of Week 17 (week ending April 29, 2023).[6]

- Thirteen influenza outbreaks and two influenza-associated school closures have been reported as of Week 19.

- Seasonal influenza activity continues to decline nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Sporadic is defined as: Small numbers of laboratory-confirmed influenza cases or a single laboratory-confirmed influenza outbreak has been reported, but there is no increase in cases of ILI.

[3]ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 19**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 19**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 17-19 (April 23, 2023 – May 13, 2023)[*]

Influenza Type	Week 17	Week 18	Week 19	2022-2023[*] Season-to-Date
Influenza A	51	40	38	101,377
Influenza B	88	61	54	6,341
Influenza Unknown Or Untyped	1	1	0	482
Total	140	102	92	108,200

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 19 (May 7, 2023 – May 13, 2023)[*‡]

Age Group	Week 19 Cases	Week 19 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	7	1.90	15,966	4,337.64
05-24	26	1.66	45,400	2,902.80
25-49	30	1.54	23,061	1,186.82
50-64	9	0.75	11,992	999.16
65+	20	1.88	11,780	1,109.19
Total	92	1.50	108,200	1,762.95

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 19 (May 7, 2023 – May 13, 2023)[*‡]
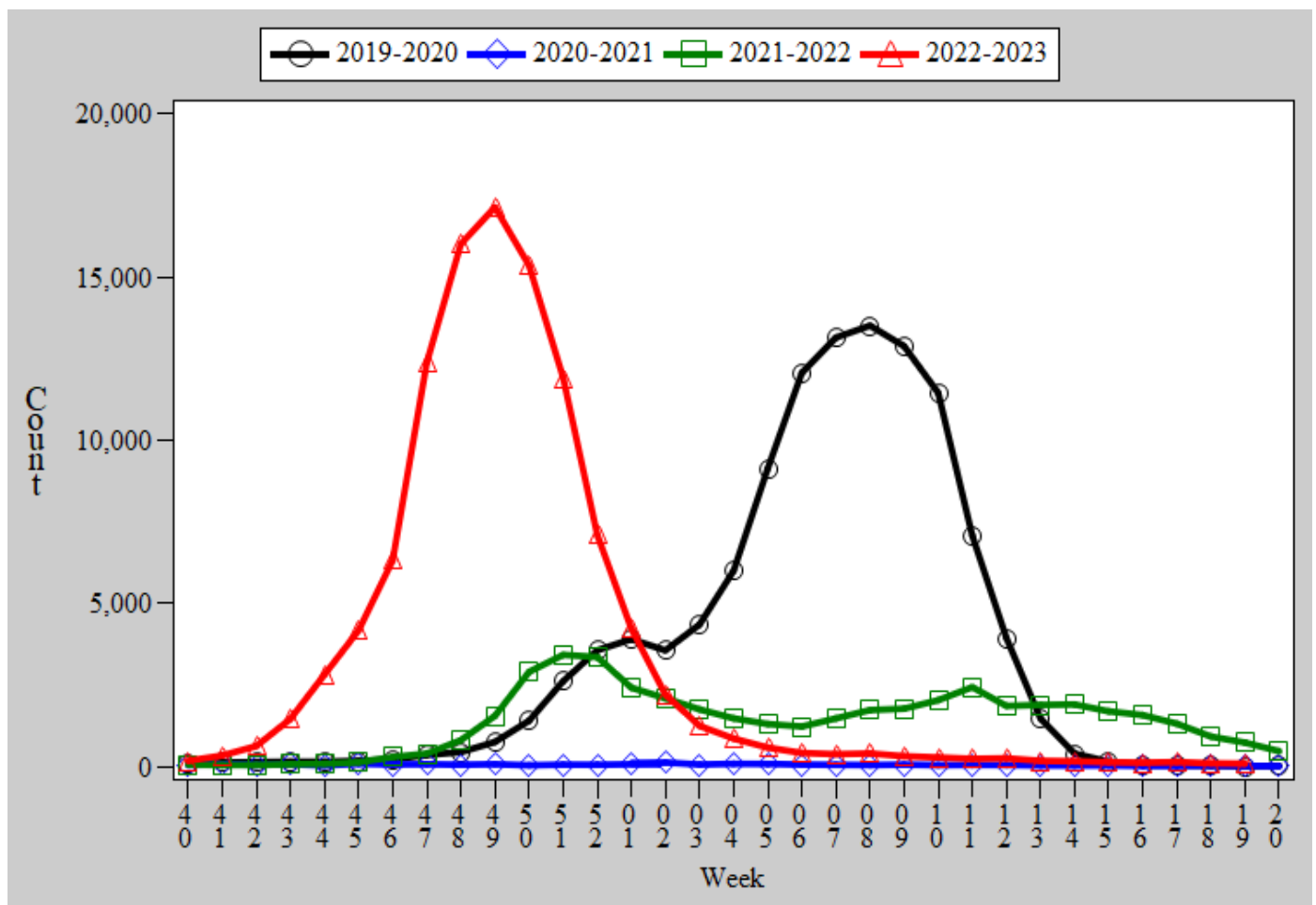
Region	Week 19 Cases	Week 19 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	18	2.67	11,342	1,680.75
Eastern	11	0.49	30,076	1,326.23
Northwest	30	1.83	30,978	1,892.67
Southeast	9	2.08	12,519	2,894.98
Southwest	24	2.28	23,285	2,216.29
Total	92	1.50	108,200	1,762.95

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
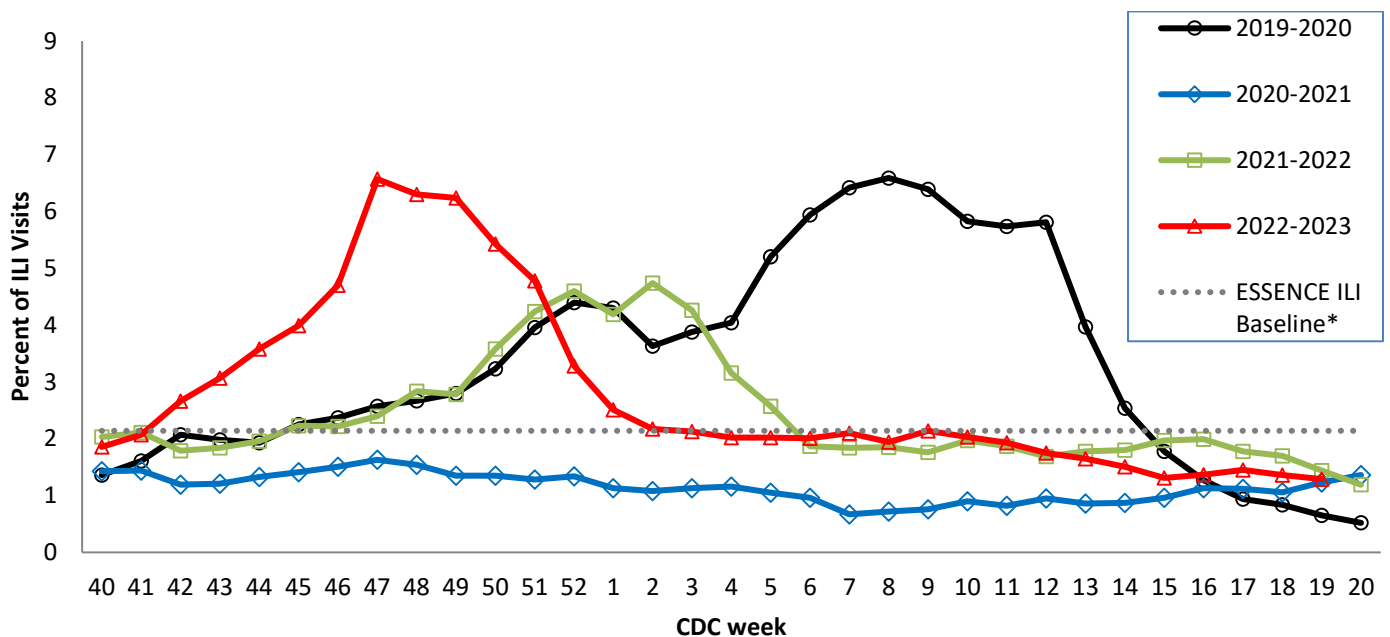[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending May 13, 2023 (Week 19). .Data Source: Missouri Health Information Surveillance System (WebSurv)

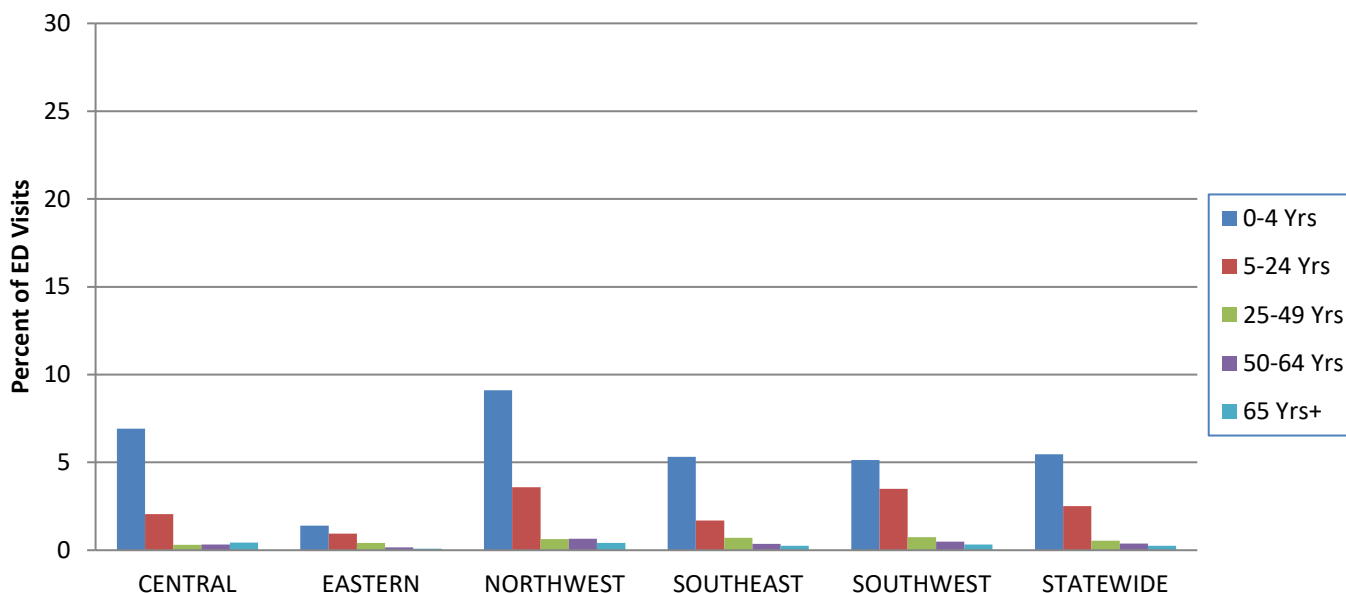# Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri
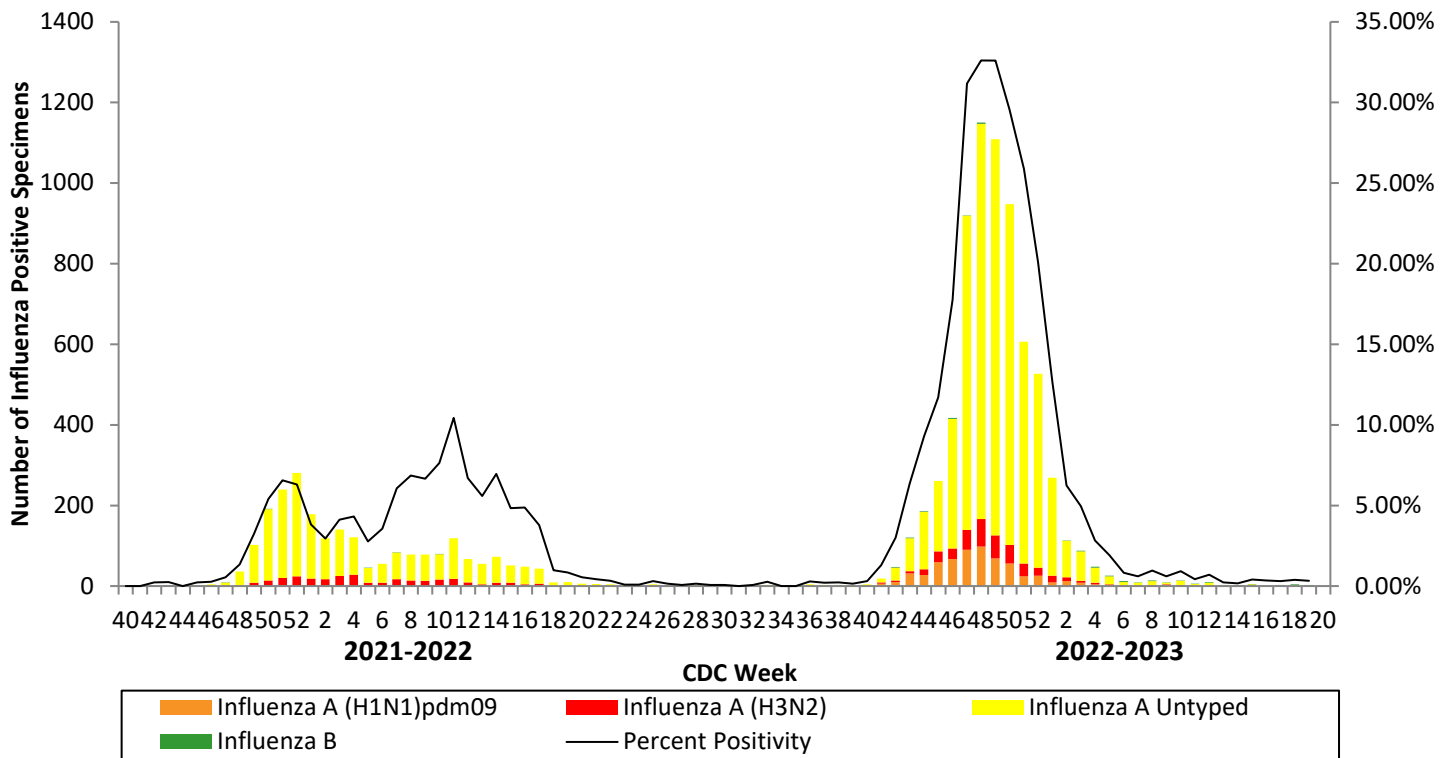
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
2022-2023 season-to-date through the week ending May 13, 2023 (Week 19).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]
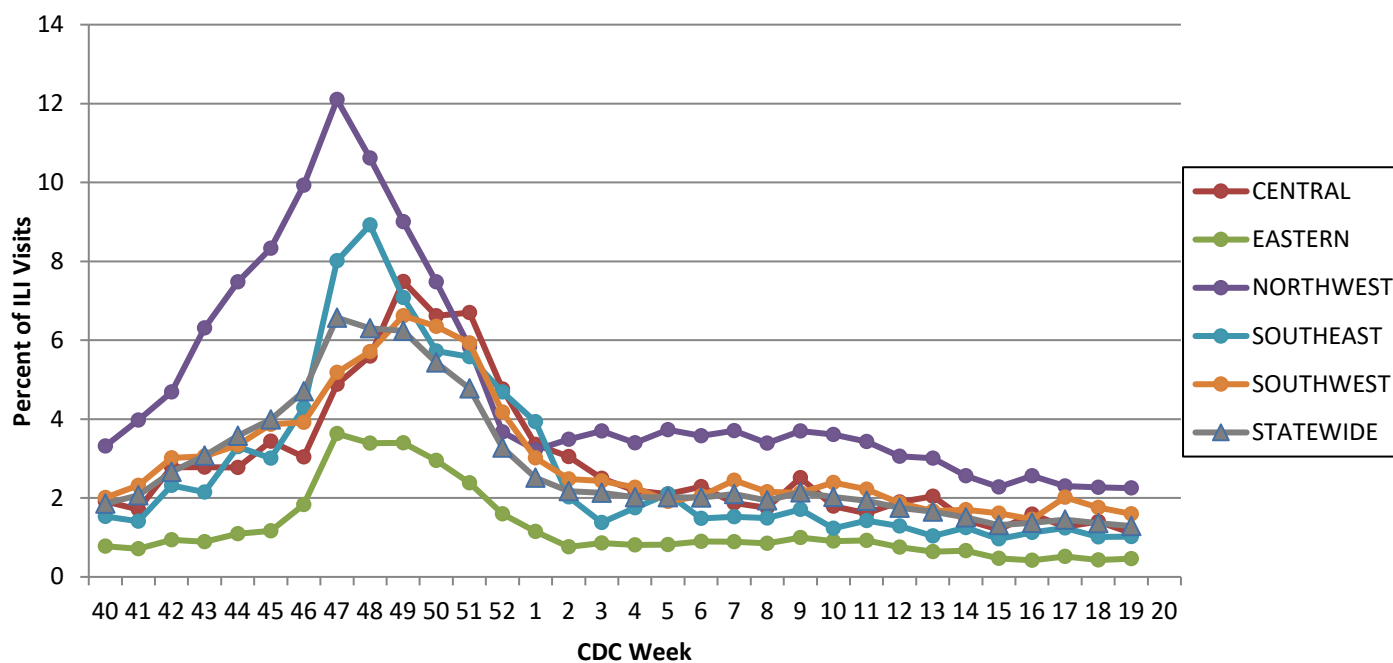

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 19, 2023[*]
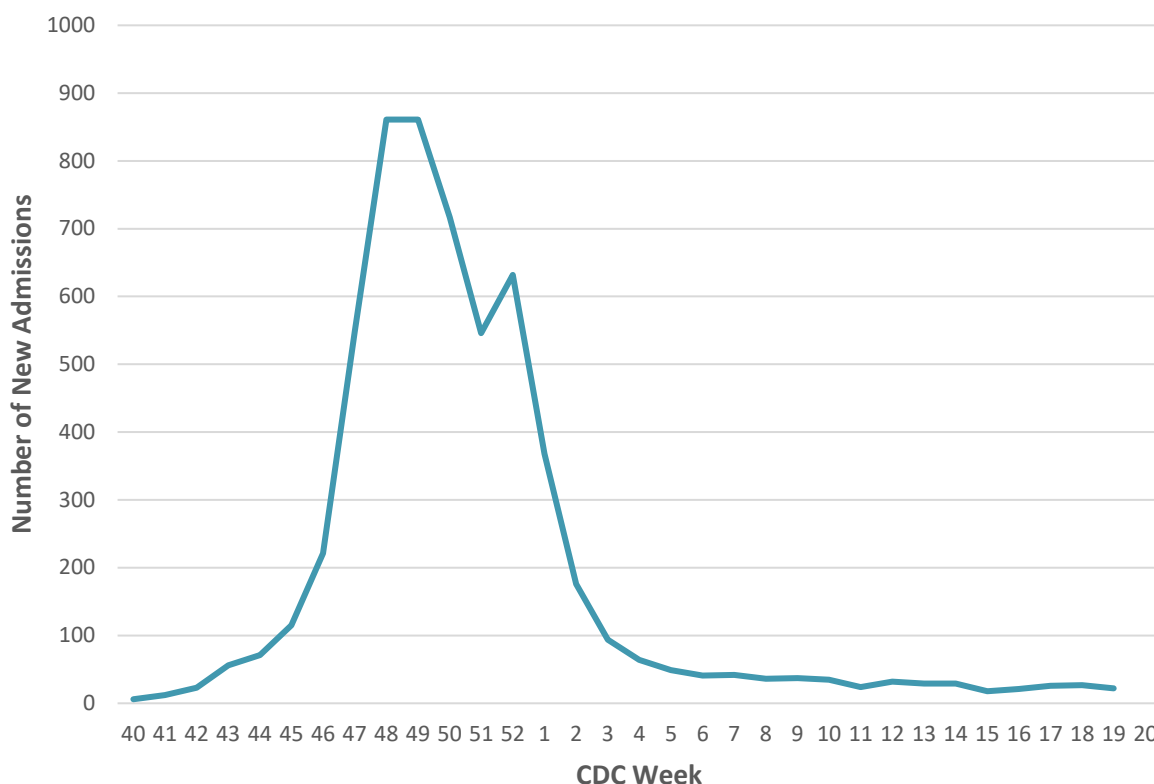

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]
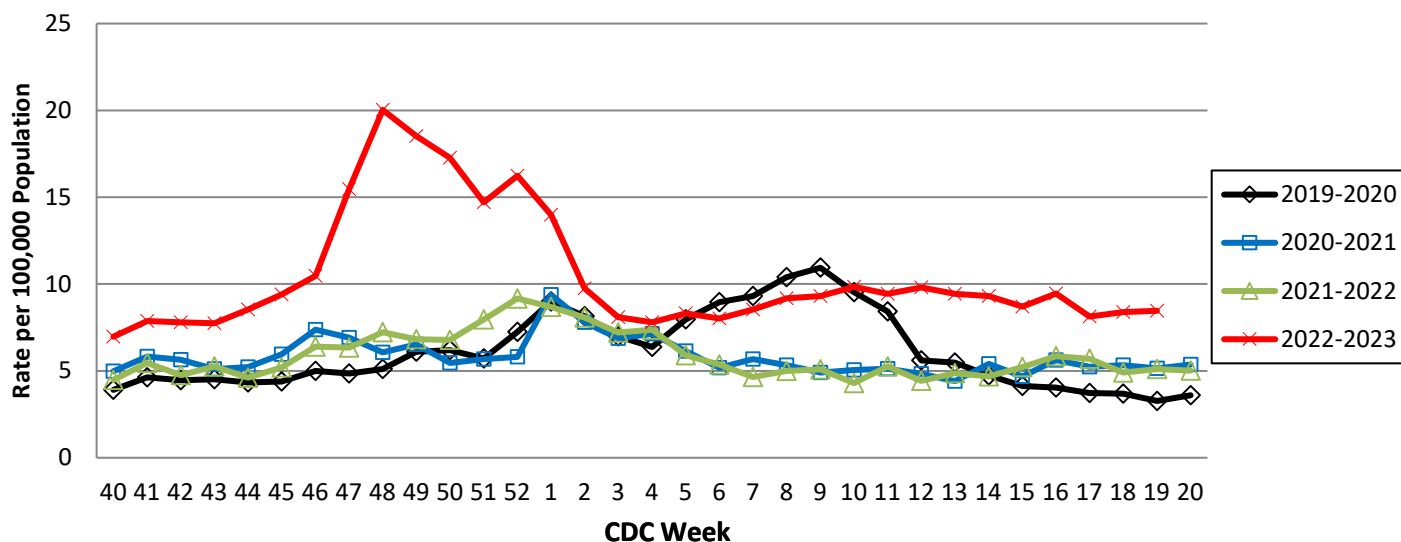

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

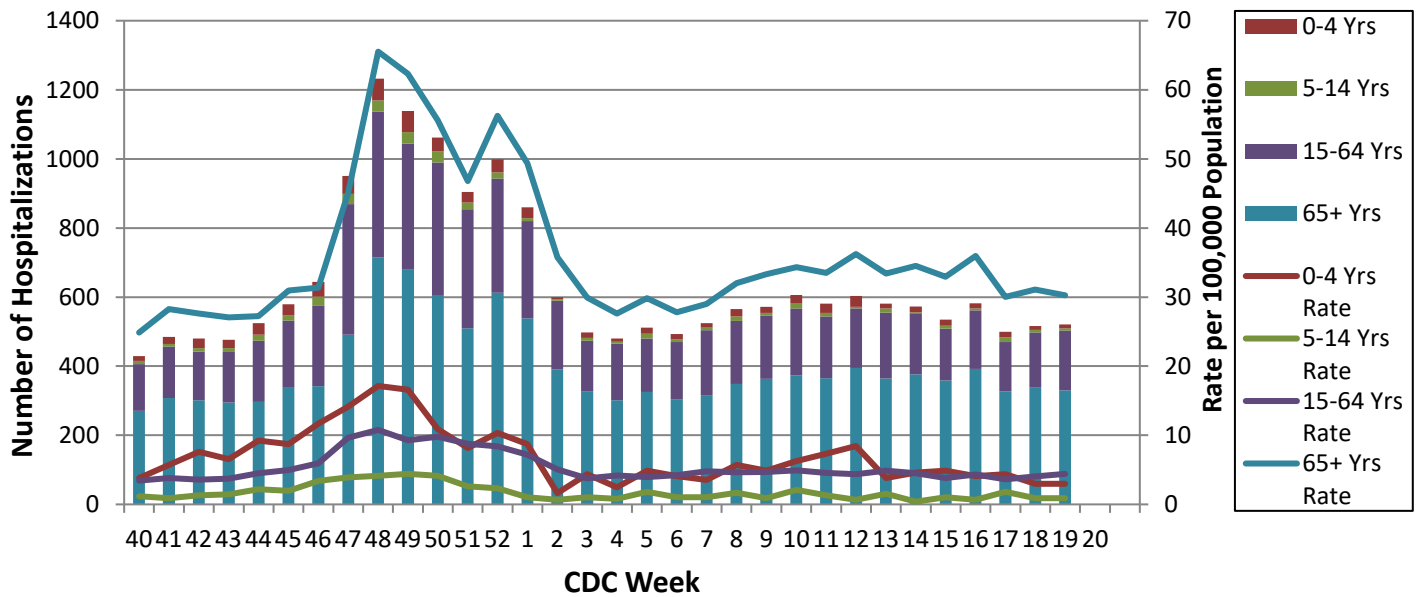**Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season**

Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov. 2022-2023 season-to-date through the week ending May 13, 2023 (Week 19).

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal. Population data from Missouri Census Data Center 2017.

Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 19, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
https://www.who.int/teams/global-influenza-programme/surveillance-and-monitoring/influenza-updates

Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 20: May 14, 2023 – May 20, 2023

All data are preliminary and may change as more reports are received.

Summary:

- Seasonal influenza activity in Missouri has remained Sporadic[2], while the Influenza-like illness (ILI) activity decreased to Level 1 in the minimal category.[3]

- During Week 20 a total of 44 laboratory-positive[4] influenza cases (18 influenza A, 26 influenza B and 0 untyped) were reported. The influenza type for reported season-to-date cases includes 93.7% influenza A, 5.9% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 0.40% for Week 20. The number of Missouri facilities reporting to NREVSS for Week 20 was limited.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE decreased to 1.11% for Week 20 (Figure 6).[5]

- Two hundred forty six influenza-associated deaths have been reported in Missouri as of Week 18 (week ending May 6, 2023).[6]

- Thirteen influenza outbreaks and two influenza-associated school closures have been reported as of Week 20.

- Seasonal influenza activity continues to decline nationwide. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

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[1]The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Sporadic is defined as: Small numbers of laboratory-confirmed influenza cases or a single laboratory-confirmed influenza outbreak has been reported, but there is no increase in cases of ILI.

[3] ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

[5]ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *Click on the jurisdiction to view the influenza data specific to that jurisdiction.*

- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 20**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 20**
- **Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date**
- **Reported Rate per 100,000 Population, Season-to-Date**

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Weeks 18-20 (April 30, 2023 – May 20, 2023)[*]

Influenza Type	Week 18	Week 19	Week 20	2022-2023[*] Season-to-Date
Influenza A	45	42	18	101,407
Influenza B	69	72	26	6,394
Influenza Unknown Or Untyped	1	0	0	482
Total	115	114	44	108,283

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins with the week ending October 8, 2022 (CDC Week 40)   Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 20 (May 14, 2023 – May 20, 2023)[*‡]

Age Group	Week 20 Cases	Week 20 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	12	3.26	15,984	4,342.53
05-24	9	0.58	45,425	2,904.40
25-49	13	0.67	23,085	1,188.06
50-64	4	0.33	11,998	999.66
65+	6	0.56	11,790	1,110.13
Total	44	0.72	108,283	1,764.31

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv).

[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 20 (May 14, 2023 – May 20, 2023)[*‡]
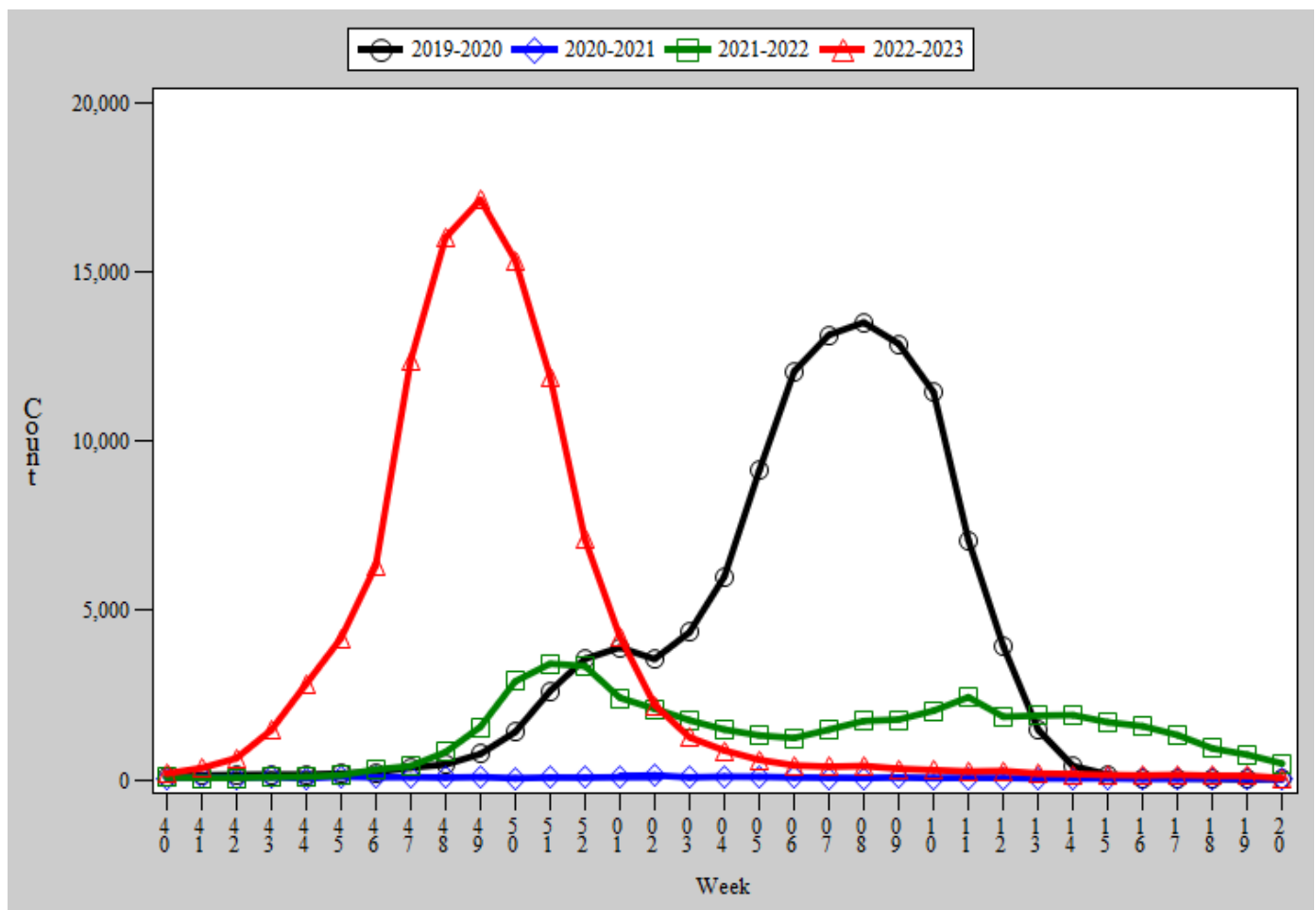
Region	Week 20 Cases	Week 20 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	4	0.59	11,351	1,682.08
Eastern	21	0.93	30,119	1,328.12
Northwest	8	0.49	30,988	1,893.28
Southeast	6	1.39	12,529	2,897.29
Southwest	5	0.48	23,296	2,217.33
Total	44	0.72	108,283	1,764.31

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
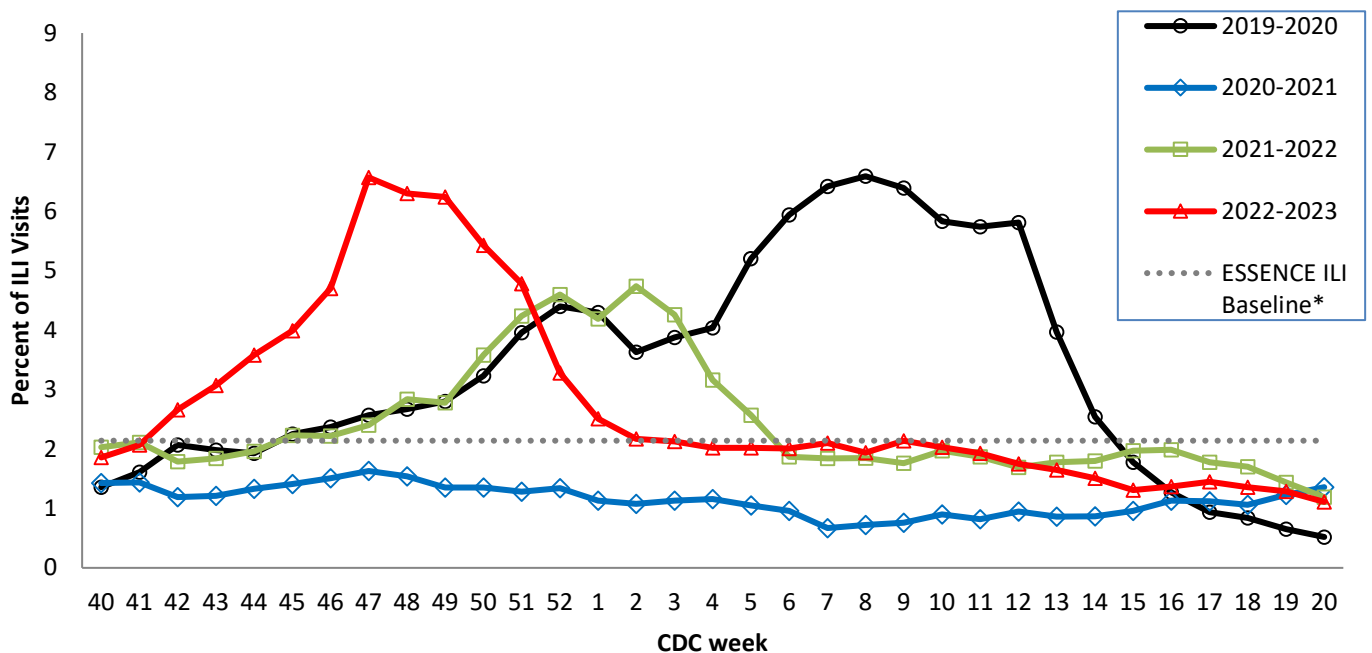[*]Influenza season begins week ending October 8, 2022 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)
[‡]Incidence Rate per 100,000 population

Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023[*]

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending May 20, 2023 (Week 20). .Data Source: Missouri Health Information Surveillance System (WebSurv).

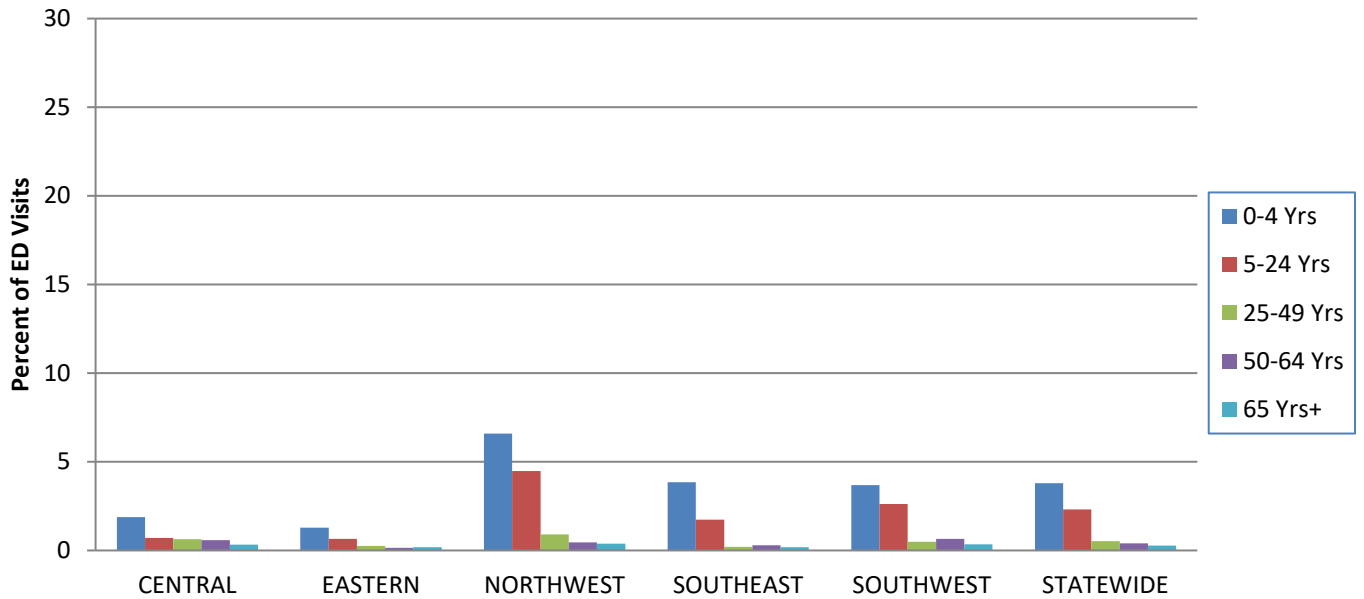# Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri
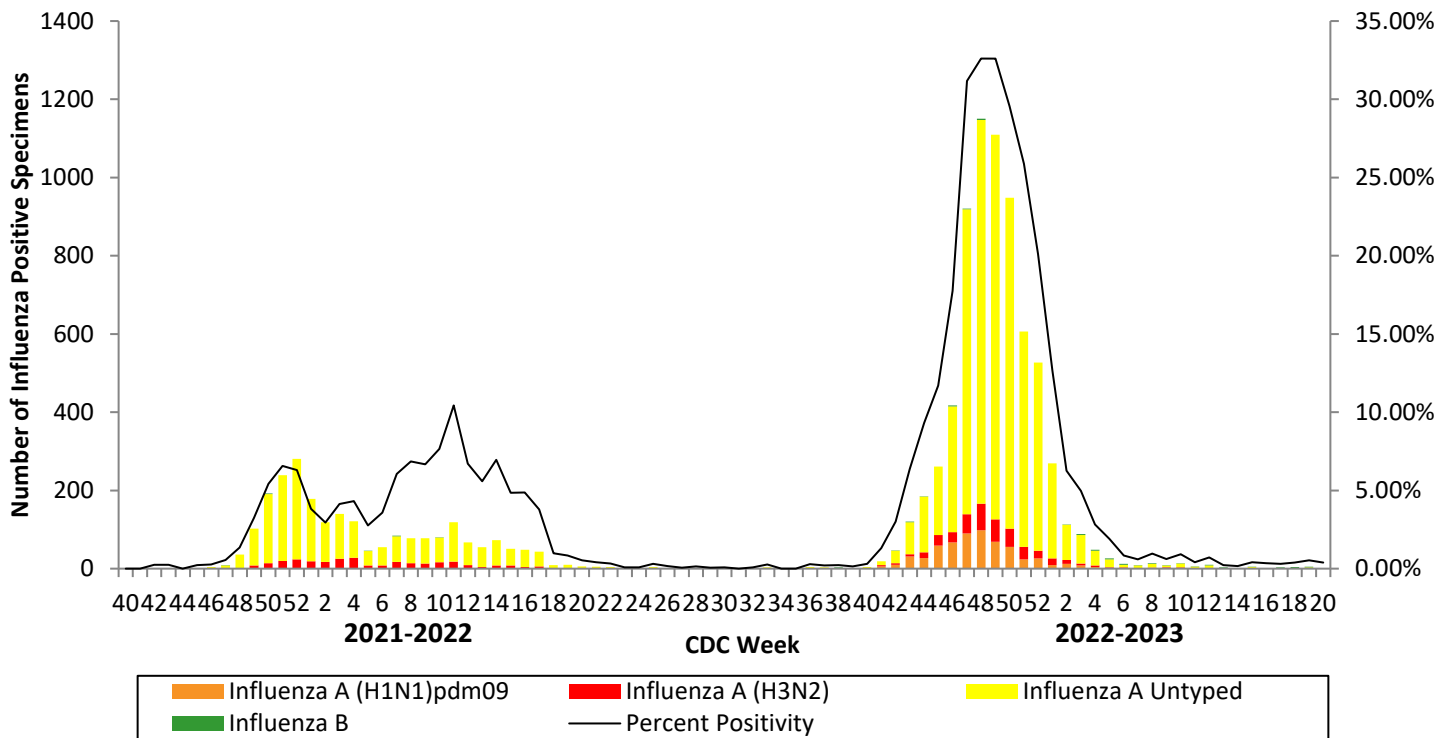
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
2022-2023 season-to-date through the week ending May 20, 2023 (Week 20).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons[*‡]

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI
visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS),
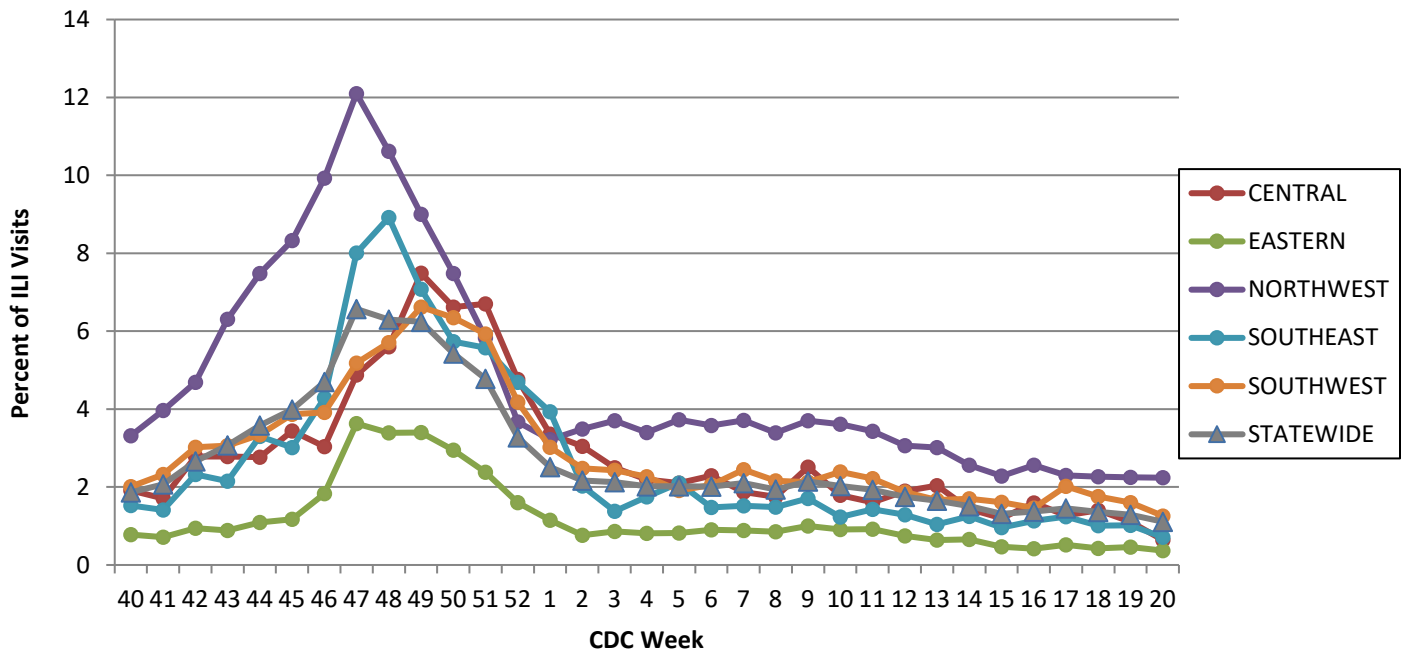Bureau of Reportable Disease Informatics, ESSENCE version 1.20.

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 20, 2023[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.
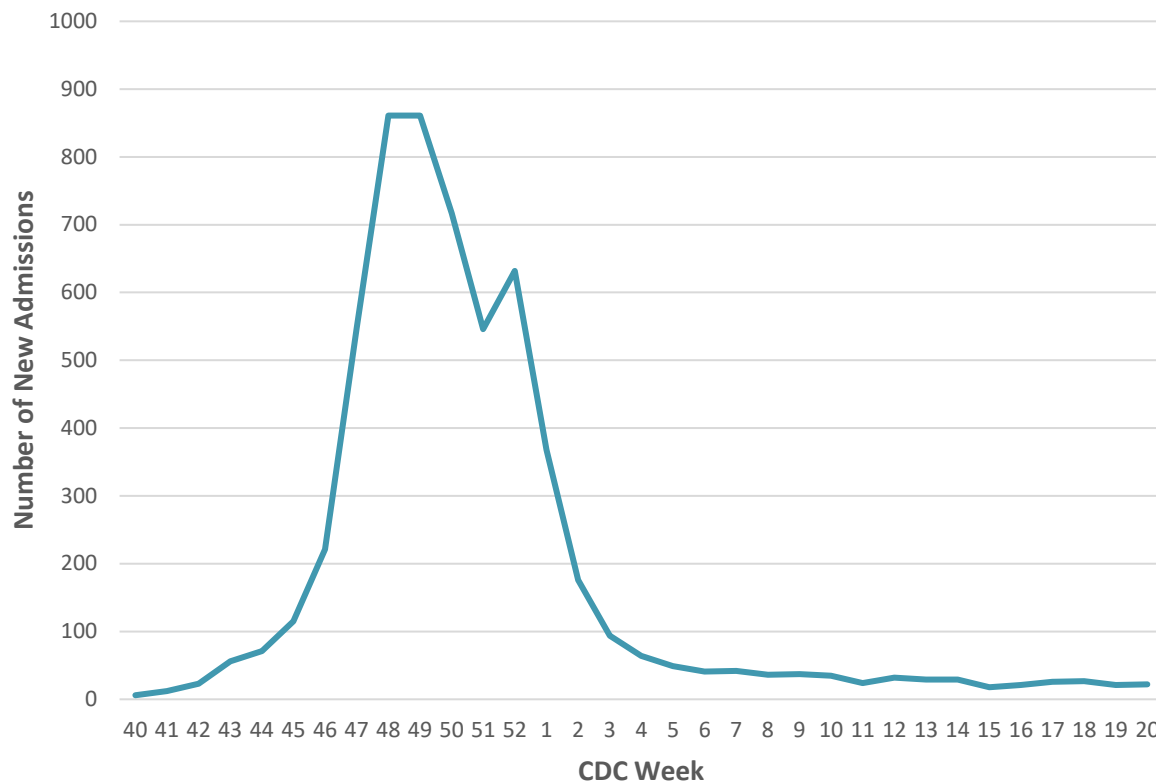
Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2022-2023 Influenza Season[*]

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
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Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season
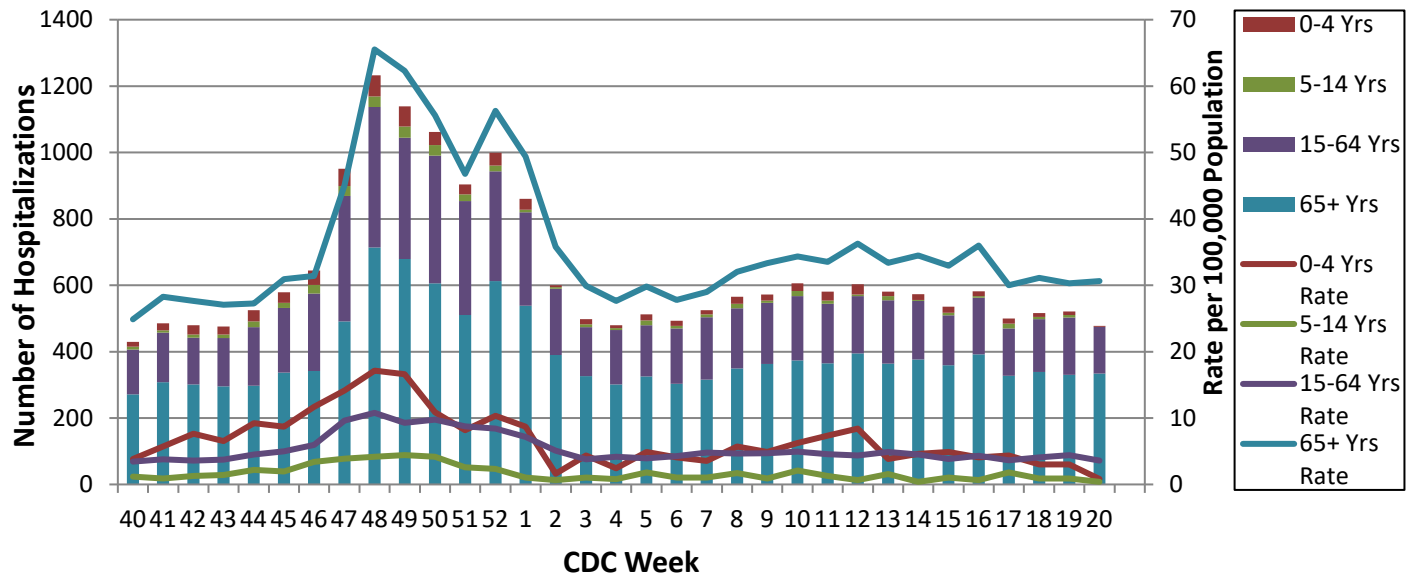

Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov. 2022-2023 season-to-date through the week ending May 20, 2023 (Week 20).

Figure 10. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 Influenza Seasons
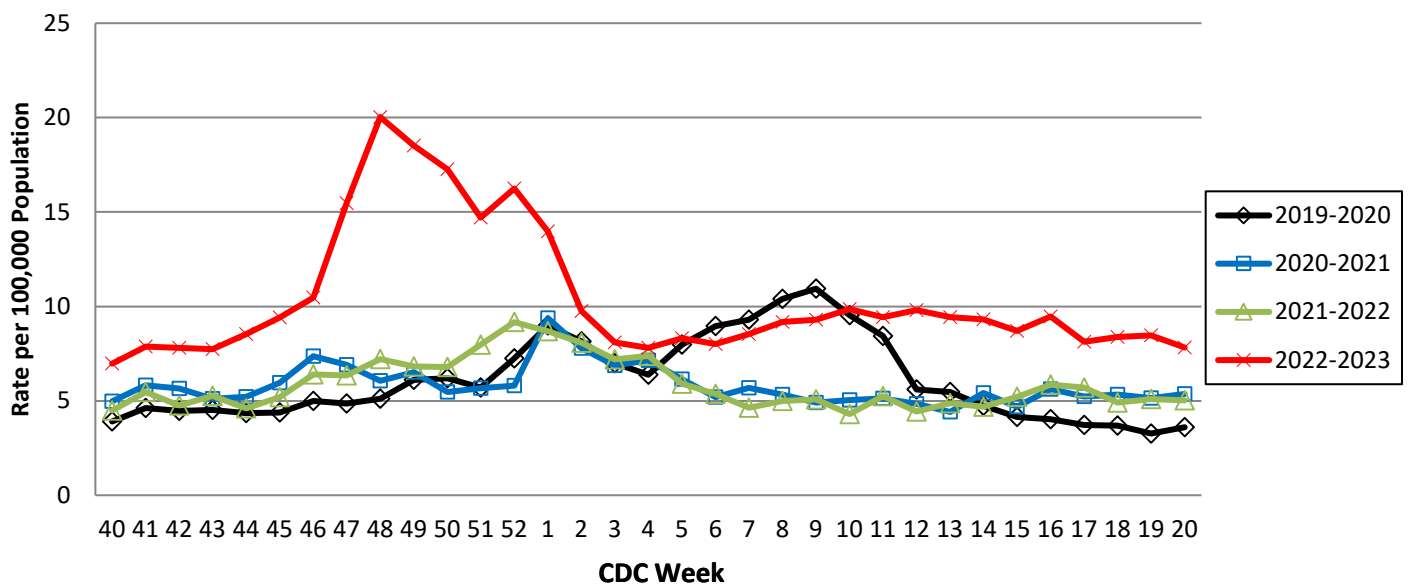
Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal. Population data from Missouri Census Data Center 2017.

Figure 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 20, 2022-2023 Influenza Season

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
https://www.cdc.gov/surveillance/nrevss/

World Health Organization: International Influenza Surveillance:
https://www.who.int/teams/global-influenza-programme/surveillance-and-monitoring/influenza-updates